

The Technology Review

Volume XII.

April, 1910

Number 2

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technology review

Published by MIT

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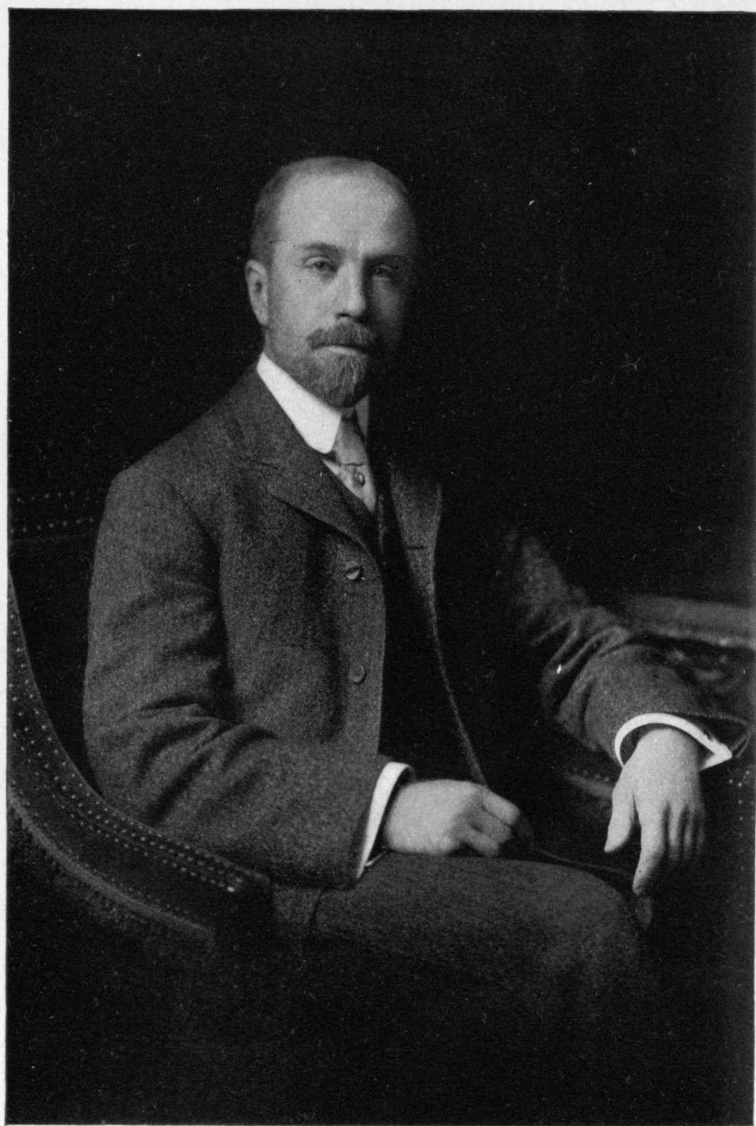
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JAMES PHINNEY MUNROE

The Technology Review

VOL. XII.

APRIL, 1910.

No. 2.

TECHNOLOGY AND THE PUBLIC HEALTH

The Part the Institute has played and is playing in Conserving Life and Health—Sanitary Engineering, Sanitary Research and Industrial Biology at Technology

In a democracy it is natural and proper that a school of pure and applied science, such as an Institute of Technology, should minister more directly than some other educational institutions to the service of the people and, of all the services to the public which such an institution can render, none is more important than its service to the public health.

Even before the Institute had taken definite form, and very shortly after a charter had been granted, its founder, who was afterwards to become its organizer and honored first President, William Barton Rogers, was invited by the famous "war governor" of Massachusetts, John A. Andrew, to serve as "State Inspector of Gas Meters and Gas," an office then lately created and afterward to become and remain closely connected with the service of the public health.

The first group of graduates from the newly formed technical college passed out into the world of practical life in 1868, and in the next class was one William Ripley Nichols, who, being graduated in chemistry, soon became a noted investigator and the leading sanitary chemist of the time. The date 1869 was to become historic, for it was in that year that the State Board of Health of Massachusetts was organized,—a board which, with Dr. H. I. Bowditch as chairman and Dr. George Derby as secretary, at once took the lead in establishing preventive medi-

cine as a practicable science. The report of work done in 1870 includes three papers from the Institute laboratories: "Air and Some of its Impurities," Dr. F. H. Storer; "Examination of the Water of Mystic Pond" and "Poisoning by Lead Pipes," both investigated by Professor Nichols, who continued to be a leading contributor to its reports, though wholly along the lines of chemistry, as the science of bacteriology did not exist until a dozen years later.

When the board undertook the classic investigation of the rivers of Massachusetts in 1872-73, Professor Nichols availed himself of the technical skill of hand, gained in using instruments of precision under the tutelage of Maria Mitchell, of a student, Ellen H. Swallow, recently admitted to the Institute as a graduate of Vassar College. Together Professor Nichols and Miss Swallow not only developed methods of attacking large problems, but systematized processes, under cramped and unsuitable conditions, which were the foundation of the widely used methods of today. They also set up the high standard of scientific work essential to an authoritative laboratory, which has been steadily maintained. In 1879 Mrs. Richards (as she soon became) made for the board the first canvass of the state for the prevalence of food adulterations, and she has since been for many years dietary expert for numbers of institutions over the land.

Professor Nichols at the height of his reputation died an untimely death from tuberculosis in 1886, but the fame of the Institute in sanitary chemistry was not allowed to falter even for a moment, thanks to the presence on the staff of Professor Thomas Messinger Drown, who, as chemist of the reorganized board, threw himself into the work with wonderful energy and sagacity, and especially because of the selection of the Institute in 1887 as the best place to carry on a regular system of the examination of the water supplies of the state. This enabled the State Board of Health to perform intelligently the duties committed to it by the Act of 1886, "to protect the purity of inland waters." For this work a special laboratory in the Walker Building, Room 36, was set aside and used continuously for ten years under the direction of Mrs. Richards. As a result of this remarkable service, a "normal chlorine map," now historic and everywhere regarded as the standard in work of this sort, was prepared and published by Professor Drown and Mrs. Richards. An investiga-

tion of ice supplies and of mineral spring waters was also made as original contributions.

In 1883 Professor William T. Sedgwick was called to the Institute to take charge of the work in natural history, and it is most interesting to note how this small department grew from one devoted solely to pure science to one of great applied usefulness. This was due to the energy and wisdom of Professor Sedgwick and the foresight and help of General Francis Amasa Walker, then President of the Institute.

Very shortly after Professor Sedgwick's appointment the title of the natural history department was changed to that of biology.

Biology is the science of life, consequently the most profound of all sciences. Nearly twenty years before the Biological Department became an active participator in public health work, courses in zoölogy, botany and physiology were offered in the Institute catalogue. The change in the attitude of the Institute with regard to biological studies came as the result of the epoch-making work of Pasteur and Koch, who were the founders of the sciences of bacteriology and micro-biology. This great work brought with it a keener realization that biology was not merely a study of the living organism itself, whether it be plant or animal, but that it also included a careful consideration of the external conditions surrounding the living thing; and this idea of the importance of environment led finally to the great work of studying the external conditions, noting their effects on the individual organism or group of organisms; and the initiation of steps to counteract those unfavorable conditions was the natural development of this point of view.

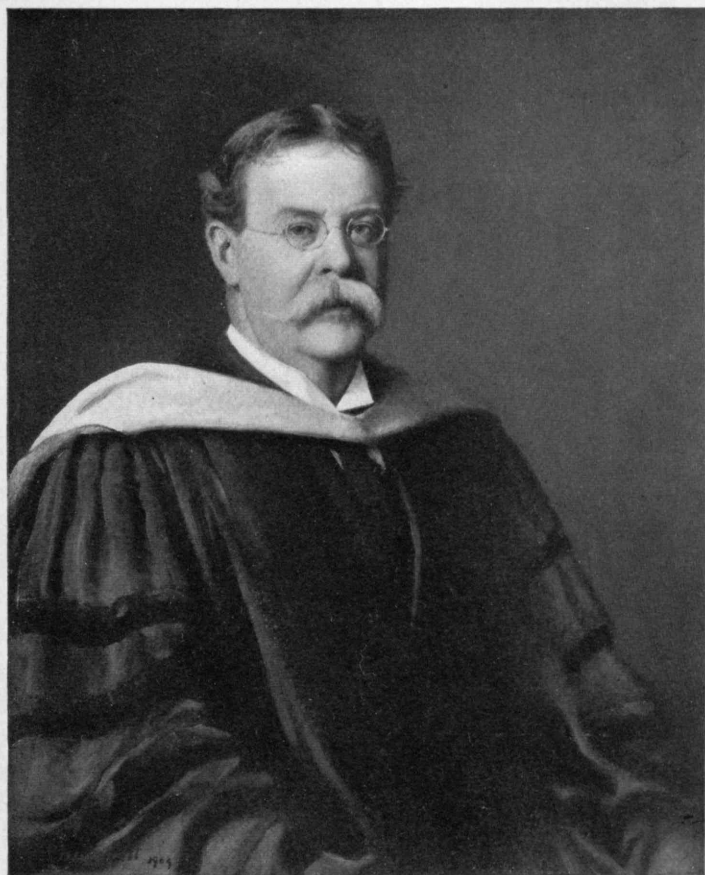
One of the first pieces of public health work in which the Biological Department participated was a thorough-going investigation in 1884 for the State Board of Health, entitled "A Study of the Relative Poisonous Effects of Coal and Water Gas." This has since proved to be the basis of similar work in England and Germany, and its conclusions have been confirmed by both British and German investigators and also by the actual experience of American cities. This work was performed by Professors Sedgwick and Nichols.

In 1887 Professor Sedgwick was appointed biologist to the State Board of Health, and some of the biological work was done on the Institute premises, although the larger part was

carried on under his supervision at the experiment station of the board in Lawrence, a field especially designed and directed by the eminent engineer, Hiram Francis Mills. These next eight years mark an epoch, not only in the development of sanitary science in America, but in the service of the Institute to the State of Massachusetts, for during these years the work already outlined went forward under the direction of Professors Drown and Sedgwick, with the able assistance of Mrs. Richards and of more than fifty graduates and other students of the Institute, including Allen Hazen, George W. Fuller, Edwin O. Jordan, Gary N. Calkins, Daniel D. Jackson, I. F. Hyams, Harry W. Clark, Fred. B. Forbes, William R. Copeland, Frederick S. Hollis and many others,—names which have since in many cases achieved national and even international reputation.

No account of the work of the Institute in relation to public health would be quite complete without reference to the large amount of sanitary work, lectures, meetings and actual investigation carried out by Professor Sedgwick in practically all parts of the country. He has carried the doctrines of preventive medicine and their application to engineering in regard to water supply, milk supply and sewage disposal throughout the whole breadth of the land from New England to the Pacific coast. It is probably not too much to claim that his influence has been the most important and far-reaching of any man's in the country in these respects, for, as has been indicated above, many of the sanitarians, whose opinions are now regarded as the highest authority, derived their inspiration and gained their first knowledge of sanitary matters as pupils of this master of men.

The Department of Sanitary Engineering is the third department of the Institute interested directly in public health problems. Professor Dwight Porter, in a recent number of *The Tech*, says: "There is no more fundamental or more generally useful brand of engineering than that classed as sanitary. The young man who enters it may expect to find a field for his highest efforts, and one in which he may be of great service to society." The sanitary engineer at the Institute gets a very broad training. Besides his engineering, he receives considerable work in bacteriology and sanitary chemistry, and the records of the graduates of this department are the best arguments as to the efficiency and thoroughness of the course.



PROFESSOR WILLIAM T. SEDGWICK, PH.B., PH.D., SC.D.

From the painting by Churchill recently presented to the Institute by his former students

The history of the Sanitary Research Laboratory and Sewage Experiment Station of the Institute established in 1902, through the generosity of an anonymous donor, makes interesting reading. The work performed here, chiefly by Professors Winslow and Phelps with the assistance of undergraduates, graduates and special students, has been of the most valuable kind and essentially practical. The various pamphlets published by the station have contained many valuable contributions to sanitary science, and have aroused world-wide attention and interest.

In connection with this important laboratory and its work, mention should be made of the collaboration between it and the United States Geological Survey.

Several investigations of great value, dealing with stream pollution and sewage disposal, have been made by the staff of this laboratory and issued by the Geological Survey as special bulletins. In this connection, Professor Phelps' studies of sewage disinfection, which have introduced a new method into sewage disposal practice, deserve special mention.

The work of the Sanitary Research Laboratory is increasing, and at the present time a new line of investigation is being started in the field of industrial hygiene. Studies are being made of special trades, and the injurious conditions surrounding them and methods devised to curb the loss of life and health caused by the dangerous nature of the industry. The possibilities in this direction are very great. There is an enormous waste of life capital going on, harmful to employer as well as to employee. Much of this could be prevented, and, as time goes on and advancement comes, the Institute will be ready to supply the knowledge which, if applied, will bring about vastly improved conditions.

Work of great importance has been done by Professor Prescott along the lines of industrial biology. The work by Professor Prescott and Mr. W. L. Underwood on the canning industry has placed this most important industry on a scientific basis. The special work done by Professor Prescott in connection with the milk supply of a large city has also demonstrated the value of scientific methods for improving the sanitary condition of such an important food-stuff as milk.

I have attempted to give briefly in the above a short history

of the three departments of the Institute dealing with public health problems in their various phases. I think it well indicates that the Institute does not merely train young men in the sciences of sanitary chemistry, biology and sanitary engineering, but that the Institute is also a worker herself in the field, and this fact is one of great importance, as the direct contact of Technology with specific problems in these lines keeps the work abreast with the times and also gives the instructional staff a broad view of practical problems.

The fields in which the graduates of these departments are working are many and varied. Among the sanitary chemists there is a group of graduates who are devoting their time to the enforcement of the Federal Pure Food Law. The work of the food chemists is exacting and manifold, requiring careful development of methods, the greatest skill in analysis and a ripe judgment for the weighing of evidence. The manufacturer and the dealer must be approached with tact and discretion. A number of graduates are bacteriologists for water-works, state and municipal laboratories and industrial laboratories. There is an ever-increasing demand for graduates to occupy positions as health officers. This is a particularly attractive field and one of undoubtedly great future. The graduates in sanitary engineering find positions with cities, states and with private engineering firms. Many of the leading consulting sanitary engineers are graduates of the Institute. A number of graduates have become teachers,—an occupation which, if not so financially attractive as other lines of sanitary work, has its own special pleasures and rewards.

It can be seen that there is plenty of choice for the graduates of the departments referred to in this article. The service of the public health has rapidly become so large that a complete mastery of all of its branches cannot be expected. Technology cannot produce men thoroughly conversant with all the details of each branch of public health work, nor does she attempt to do so, but she has demonstrated her ability to train men so that, when they leave the Institute, they are capable of making not merely a good showing, but are able to become leaders. If one considers the comparatively few men who have been graduated from or studied in those departments of the Institute and the positions and reputations that they hold today, one is im-

pressed with the large proportion of successful careers that has been the lot of these students.

Much of this has been due to the inspiration received from the professors and instructors. The individual contact between scholar and teacher which has been possible on account of the small size of the classes has also undoubtedly helped.

There is no field of endeavor more fascinating at the present time than of the public health. One does not have to be even an altruist to take up his life-work along these lines at the present time. Pecuniary recompense for trained men is yearly increasing, as the importance of the service rendered becomes realized. Conservation of our national resources has taken up much of our attention recently, but the most important national resource to conserve and strengthen is the national health.

Sanitary progress has been rapid during the past half-century and everything points to an even greater progress in the future. Technology is alive to the situation, and will take its share of the work, and, as time moves on, the value of the efforts of the few men who started the movement will become more and more apparent, and the grand significance of their labors will be discerned and respected.

The success of the individual graduate, the attainments of the individual professor, are only a part of the forward movement. It is the concerted effort that moves the load, controls its direction and motion, and the growing army of bacteriologists, sanitary chemists, sanitary engineers, health officers and teachers yearly passing from the Institute and other institutions of learning cannot fail to make its presence felt and cause the gradual evolution of mankind to a greater efficiency of body and mind.

Herbert Spencer pointed out years ago that there was such a thing as physical morality, and the sanitarian is certainly as indispensable as the clergyman, and their work lies closer together than they often think. The old adage says that cleanliness is next to godliness, but the modern conception is that cleanliness is an intrinsic part of godliness, and, with this in mind, it is not a far step to the view that the furtherance of public cleanliness and all that this entails is work well fitted to Technology men.

THE TRIP OF THE MUSICAL CLUBS

A Royal Welcome and Great Enthusiasm Everywhere—Quality of the Work of the Clubs Excellent

During the mid-year vacation the Massachusetts Institute of Technology Glee, Mandolin and Banjo Clubs made their first extended tour, playing in Buffalo, Detroit, Chicago, Rochester and New York. Although the trip was undertaken with considerable hesitation, it proved an unqualified success. The interest evinced by the alumni in this evidence of undergraduate enterprise, and the enthusiasm aroused at the various points visited, were sufficient justification of the venture without considering the good times enjoyed by each of the thirty-nine members of the clubs who took the trip. The performances of the clubs were all of a high standard, comparing favorably with those of other college clubs that have visited the same points, so that the Institute was brought in a favorable light to the attention of many prospective college students or their parents. Besides, the trip should do much to destroy the false and all too common notion that Technology has no social life; and the members of the clubs were given a demonstration of the loyalty of Technology alumni and of the true meaning of Technology spirit that none of them will soon forget.

The moving-picture films of the alumni reunion held last June were loaned for the trip by the Alumni Association, and were shown in Buffalo, Detroit, Chicago and New York. They served to remind many of the alumni very vividly of their good times, and were the cause of much amusement and enthusiasm.

The clubs left Boston in a special sleeper on Sunday evening, January 30, for Buffalo, where they spent Monday and Tuesday. Upon their arrival they were taken to the University Club, which served as headquarters during their stay. At noon the Mandolin and Banjo Clubs gave a short programme before one thousand pupils in one of the large high schools, and at the same time the Glee Club appeared before fourteen hundred pupils in another

high school. Afterwards a luncheon was tendered to the members of the clubs by the alumni at the University Club. In the afternoon a reception in honor of the clubs was given in the beautiful home of Mrs. C. P. Hugo Schoellkopf. The house was decorated with Tech banners and pennants, and all enjoyed themselves thoroughly. Mrs. Schoellkopf's kindness was especially appreciated, as she is not directly connected with the Institute in any way.

After a dinner given by the alumni the clubs appeared at the Twentieth Century Club before an audience of five hundred. The concert was well received, and the large audience was especially gratifying, in view of the fact that the Boston Symphony Orchestra played in Buffalo on the same evening. Afterwards a smoker was held at the University Club, which was attended by all the Tech men in the city and by members of the University Club from other colleges.

On Tuesday morning, groups of the members of the clubs visited the plant of the Lackawanna Steel Works, the Pierce automobile factory, the Larkin soap factory, the Calumet & Hecla smelting plant and similar institutions. In the afternoon nearly all the fellows visited Niagara, where they saw the falls and took the trip over the Niagara Gorge Railway. On both Monday and Tuesday nights the men were entertained at the clubs and homes of the alumni.

On Wednesday afternoon they reached Detroit, and made their headquarters at the University Club, where they were entertained at dinner by the Detroit alumni. The concert was given in the Church of Our Father before an audience of nearly nine hundred, the largest on the trip. After the concert a smoker was held at the University Club, and all had a very jolly time. About one-half of the fellows left on a late train for Chicago, while the rest spent the night in Detroit as guests of the alumni.

In Chicago a dinner was given in honor of the clubs by the alumni at the University Club. The concert was held in Music Hall in the Fine Arts Building. An audience of seven hundred displayed the greatest enthusiasm, which reached its climax when over one hundred alumni came up on the stage to join in singing the Stein Song. Afterwards a smoker was held at the University Club, and the clubs left Chicago at 3 A.M. with the highest opinion of the hospitality of the north-western alumni.

Rochester was reached on Friday evening just in time for the concert, which was held in the University of Rochester gymnasium. An audience of about seven hundred attended, in spite of the competition of the Boston Symphony Orchestra, attesting the activity of the newly formed local alumni association. The concert was followed by an enjoyable dance, and the members of the clubs spent the night in Rochester at the homes of the alumni.

On Saturday morning the clubs left for New York, where they terminated their trip by playing at the annual banquet of the New York Alumni Association at the Hotel Knickerbocker. The members of the clubs considered themselves fortunate in being able to attend this large and enthusiastic alumni gathering.

Credit for the success of the trip should be given to Mr. W. W. Warner, '11, manager of the clubs, and to the local committees of the alumni, who arranged and effectively advertised the concerts, and who did so much for the entertainment of their undergraduate guests.

MAURICE R. SCHARFF, '09.

Professor Crosby Given a Loving Cup

On the anniversary of his sixtieth birthday, January 14, Professor Crosby was presented with a silver loving cup by present and past instructors in the Institute Department of Geology. The memorial is engraved with the following names: Thomas A. Jaggar, Jr., Charles H. Warren, Reginald A. Daly, Hervey W. Shimer, William H. Niles, George H. Barton, Gerald F. Loughlin, Douglas W. Johnson, Charles H. Clapp, James F. Kemp and Amadeus W. Grabau. The presentation of the cup on this occasion was a fitting testimonial to the high esteem and affectionate regard in which Professor Crosby is held by those who have served in the department which he was largely instrumental in building up.

DINNER TO J. P. MUNROE

Recognition Given where it is Due—Mr. Munroe presented with a Silver Service and a Purse of Gold

The dinner given in honor of James Phinney Munroe by the Association of Class Secretaries, January 11, at the University Club, was a hearty and genuine expression of the respect and admiration in which he is held by his Technology friends as well as of appreciation and gratitude for his ten years of fruitful labor as editor of *THE TECHNOLOGY REVIEW*.

E. S. Webster, '88, president of the Alumni Association, presided, with Mr. Munroe on his right and President Maclaurin on his left. The guests were Professor Elihu Thompson and C. A. Stone, '88, representing the Executive Committee of the Corporation; Professor Dwight Porter, chairman of the Faculty; Professor A. L. Merrill, '85, secretary of the Faculty, and Walter Humphreys, '97, registrar. There were about fifty present. The west dining-room of the University Club was decked for the occasion in a red and white color scheme.

Mr. Webster said in part: "We are here tonight to show to the best of our ability our appreciation for what Mr. Munroe has done for the Massachusetts Institute of Technology. In everything which he has attempted he has succeeded, and the Institute has benefited. When he was president of the Alumni Association from 1894 to 1897, the attendance at the dinners greatly increased. He organized and was president of the Technology Club for several years. With Dr. Williams he conceived the idea of the Income Fund, which now nets the Institute about \$40,000 yearly, and they tell me they do not know what they would do without it."

Professor R. H. Richards, '68, spoke of Mr. Munroe as a student; Dr. H. W. Tyler, '84, on his career as Secretary of the Institute; Colonel F. L. Locke, '86, on his work as a member of the Corporation; and A. D. Little, '85, on his services to the *REVIEW*.

Perhaps the most touching tribute of all was that of Professor Richards, who came to the banquet from the surgeon's hands, with a broken rib, which injury he had received while skating. In describing the death of President W. B. Rogers, who expired on the platform at the time when Mr. Munroe was graduated, Professor Richards said, "Munroe picked up Rogers' mantle as it fell, and has worn it ever since, and worn it beautifully, carrying on the great work which Rogers started as he would have had it carried on."

Regarding Mr. Munroe's work as Secretary of the Institute from 1883 to 1889, Dr. Tyler declared that he was the only man who had occupied that position who had not been a member of the instructing staff, and that he performed his multitude of duties single-handed in such a manner that, to keep abreast of the pace he set up, a staff of assistants was necessary when his successor was appointed.

Colonel Locke said in part: "Mr. Munroe was appointed to the Corporation in 1897, subsequently reaching his present status of secretary. He is known throughout the world for his honest and faithful work, carried on in perfect harmony with all those who came in contact with him, through his many connections of an educational character in many localities. He has been one of the few faithful men to go into detail in a painstaking manner in everything he attempted."

Concerning Mr. Munroe's work incident to the establishment of the REVIEW Mr. Little said: "Munroe *was* THE TECHNOLOGY REVIEW. To his intimate knowledge of the traditions of the Institute, his glowing enthusiasm for the hopes and aims of its great founder, his close familiarity with conditions and needs as then existing and his clear vision of the trend and course of the Institute development was due the early recognition of those ideals toward which the REVIEW has consistently and continuously aimed."

After quoting from an article by Mr. Munroe, entitled "Ten Years of the Review," Mr. Little continued: "That THE TECHNOLOGY REVIEW has been all this and more, we owe, gentlemen of the association, to James P. Munroe, nor should we, in gladly recognizing this obligation, forget that 'it is but a single item' in the long schedule of our indebtedness to him for equally effective and unassuming service in every department of Institute activities,

no less than in the broader field of general education and all that goes to constitute good citizenship."

President Maclaurin in the course of his remarks touched on civil service as exemplified by Mr. Munroe, saying: "An educational institution is judged by the loyalty of the men it turns out, and Tech is taking the lead in teaching the whole country the need for ideal civic life through the loyalty of her sons to duty."

In presenting the gift of the Association of Class Secretaries,—a coffee and tea service with a purse of gold to purchase books,—Frederic H. Fay, the secretary, said:—

To a meeting of the Association of Class Secretaries it is quite superfluous to speak of Mr. Munroe's activities in this Association. We know the man, and we realize full well that his work with us has by no means been confined to *THE TECHNOLOGY REVIEW*, great as have been his labors upon that magazine during the ten years in which it was published by the Class Secretaries Association. We know that he was largely instrumental in organizing this Association nearly fourteen years ago, that he has been a constant attendant at our meetings, ever ready with his counsel and help, an active worker in all that the Association has undertaken for the Institute.

We who know him so well will not attempt to express in further words of eulogy that which is in our hearts tonight. We have chosen another way in which to give expression to our admiration and regard for our fellow-member whom we delight to honor as the Institute's foremost alumnus.

Mr. Munroe, the Association of Class Secretaries brings to you this offering filled to the brim with that intangible but none the less deep and true regard we hold for you as a friend and with that admiration which we have for your years of devoted service to the Institute's cause through your connection with *THE TECHNOLOGY REVIEW*. The spoken word soon dies and is forgotten; but, believing in the old saying that speech is silver and silence is golden, we have selected this offering in the hope that in the years to come not only may it testify, by its presence in your home, to the esteem and affection in which you are held by your fellow-members of the Association of Class Secretaries, but that it may add to your library as well some of the books that you like best, in the silent reading of which will be mingled, I am sure, golden memories of your years of intimate association with your fellow-alumni.

In his reply Mr. Munroe said in part:—

My very dear friends, I really don't know what to say. I feel like Rip Van Winkle, "I don't know myself." I suppose I ought to have

prepared a speech, but it would have been like a man preparing a speech for his own family. If I had all the eloquence of Demosthenes and Webster and all the rest, I could not express what all this has meant to me. You fellows have done all the work, and I have only been the instrument of your hands. Even if I had done anything more than the rest of you, which I contend I have not, I have been more than rewarded in the friendship of men like you and all the hundreds of Institute men whom I am proud to call my friends.

I believe the friendship of Institute men is more enduring and stronger than that of other men, on account of the Institute atmosphere. The spirit which means tremendous sacrifice, exemplified by General Walker and our other Presidents, the Corporation and the Faculty, has permeated the very walls, so that all men who come within them contract it, and are always willing to work and let the other fellow get the credit.

Alluding to the work of Technology's sons in general, Mr. Munroe said:—

There is a tremendous influence rolling up like a great snowball all over the country for a better public service, brought about largely by the work of Tech men in federal and municipal positions, where they have shown that a man can be a public servant and carry on public work solely for the public good, so that the grafters are becoming ashamed of their vocation. It is the Institute spirit which is going to purify the whole public service.

Forty-five Years of Service

Mrs. Margaret Stinson this year completes her forty-fifth year of service at the Institute, having been engaged by President Rogers at the time the Institute was founded in 1865. Mrs. Stinson is still in active service in the Chemical Department, and probably no one connected with the Institute can remember the names of so many men as she.

Mrs. Stinson is as vitally a part of the Institute as the columns of Rogers, and thousands of men who read this, and are reminded of her, will wish her long life and happiness.

NEW TERM MEMBERS OF THE CORPORATION

At the meeting of the Corporation held March 9 the following men were selected as term members of the Corporation from the five names presented by the Alumni Association: Hon. Frank W. Rollins, '81; Edwin S. Webster, '88; Edward Cunningham, '91.

FRANK W. ROLLINS, '81. Special student in the General Course. Banker and lawyer, Concord, N.H.

After leaving the Institute, went to Harvard College and then to Harvard Law School for one year. Then finished studies in Concord, N.H., and was admitted to the New Hampshire bar in August, 1882. After practising about a year, embarked in the present business, that of dealing in municipal and corporation bonds, forming the present corporation of E. H. Rollins & Sons. Has continued in this business since, and has at present offices in Boston, New York, Philadelphia, Baltimore, Chicago, Denver, San Francisco and Los Angeles. In 1895 was president of the New Hampshire senate, and in 1899 and 1900 was governor of the state; trustee and treasurer of St. Paul's School, Concord, N.H.

Author of "The Ring and the Cliff," "Break o' Day Tales," "The Lady of the Violets," "Old Home Week Addresses," "What can a Young Man do?"

President of the New Hampshire Forestry, State of New Hampshire Good Roads Association, and various other societies of a more or less philanthropic nature.

EDWIN S. WEBSTER, '88. Graduate in Electrical Engineering. Member of firm of Stone & Webster, Boston, New York and Chicago.

From 1888 to 1889 with Kidder, Peabody & Co., bankers; 1889 to date, of the firm of Stone & Webster.

President of the Alumni Association; president Council of the Alumni Association; chairman of Reunion Committee; member of Site Committee.

Member of American Institute of Electrical Engineers, Boston Society of Civil Engineers, American Electrochemical Society.

EDWARD CUNNINGHAM, '91. Graduate in Chemical Engineering. Treasurer and member of Board of Directors of Samuel Cabot, Incorporated, Boston, Mass.

With Samuel Cabot, manufacturing chemist, from 1891-1901 (manager from 1897-1901). Retired from business in 1901 on account of illness. Travelled in the United States, Europe and Japan, 1901-05. Returned to the business of Samuel Cabot in 1906. Treasurer and member of Board of Directors, Samuel Cabot, Incorporated, 1907-09.

Member of Alumni Committee on the School, 1896-99. Member-at-large of Alumni Council, 1909.

Bequest to the Institute

The Institute will receive \$10,000 from the estate of Mr. John Rayner Edmands, '69, who died March 26. Besides this gift to the Institute, his estate at 61 Garden Street, Cambridge, is left to Radcliffe College as a memorial to his late wife. A thousand dollars each is left to the Appalachian Mountain Club, to Harvard University and the East End Christian Union of Cambridge. Mr. Edmands' telescope and \$500 for setting it up are left to Brown University as a memorial to the early efforts of Alexis Caswell to establish an astronomical observatory at that institution.

Tech Track Team Strong

The New England Intercollegiate Athletic Association will hold its annual track and field meet at Tech Field on May 20 and 21. There will be a close race for first place between Dartmouth and the Institute, and the status of the teams is so close that the meeting will be one of unusual interest. Coach Kanaly has been working steadily for a well-balanced team, and his work is likely to be heard from, although Dartmouth is still a strong favorite for the honor. Tech's principal strength will be in the half-mile and two-mile events.

ACTIVITY AT ALUMNI CENTRES

New York Club still growing and doing Things—Dr. Mac-
laurin's Swing around the Circle—Sounds of Revelry in
the Connecticut Valley—Chicago finances a Tech Crew
—New Club formed at Rochester

THE TECHNOLOGY CLUB OF NEW YORK.—The fourteenth annual dinner of this club at Hotel Knickerbocker, February 5, the first annual gathering since the acquisition of our new club-house, marked a high record in attendance, enthusiasm and general jollity. One hundred and eighty-seven men joined in welcoming as our guests of honor President Maclaurin and President Bemis. The M. I. T. Musical Clubs dropped in on their return from their joyously successful western trip, and, when the doors were opened, greeted the New York men with lively strains of banjo, mandolin and guitar. The balconies were graced with ladies, whose presence added charm to the occasion.

R. S. Allyn, '98, was master of ceremonies, but was relieved of responsibility until after the repast, as the various class tables proceeded with commendable competition to inaugurate an attractive programme of cheers, ovations to guests and loud calls for songs and encores from the musical clubs. The Boston men, although ferociously hungry, responded nobly, and sang and played all the songs ever dreamed of by college men, and in educating the ancient alumni respecting Tech repertoire established a reputation which will crowd concert halls in the future.

When the repast was concluded and the musical men were allowed to subside, Mr. Allyn called upon Mr. William H. King, the scribe of the club, as Mr. Harold Binney, the president, was absent by illness. Mr. King proceeded to state what he said Mr. Binney would say, namely: that the ladies, guests, members of the club and musical men were welcome; that all is well with the Technology Club of New York; that the new club-house receives only praise from its members, at least seventy-five of whom are there daily; that membership has doubled since its

establishment; that the non-resident membership, recently created, bids fair to exceed resident membership, as Boston, Chicago and New Orleans candidates are soliciting membership, so that the figure set of one thousand will soon seem a mere bagatelle; and that all men, when members, are inevitably ready and anxious to be of service to Mr. Bemis in behalf of the Alumni Association and to Dr. Maclaurin in behalf of the Institute. Mr. Bemis then extended the felicitations of the Alumni Association, and outlined the progressive plans for usefulness contemplated by the Association and by the Alumni Council, in the accomplishment of which he sought the interest and co-operation of New York.

Dr. Maclaurin received a genuinely enthusiastic welcome, which must have assured him of the admiration and the warmth of affection in which he is held by New York Tech men. He said that he felt at home in New York, although he now also feels at home in Boston, and that he considered we are, as he is, vitally interested in the progress of the Institute. He discussed the various problems awaiting solution,—the change of site, the development of the work of the Institute, the requirement of keeping pace with and ahead of new subjects of scientific interest. He referred to what has been accomplished by alumni contributions, and emphasized the necessity for financial support and of awakening men to a realization of the importance of the work being accomplished by the Institute and the leading position attained by its Faculty. The most important feature in every educational institution, he said, is the spirit which pervades it, and the Institute is fortunate in the development of what is recognized as the "Tech spirit" of work and co-operation. Other portions of his address were thus reported in the *New York Times*:

All serious men recognize that our democracy today is exposed to many grave dangers. One of these is due to the current notion, founded on a false theory of democracy, that one man is as good as another, and, therefore, that it doesn't matter very much who gets a job, with the proviso, perhaps, that he be reasonably honest. Of course, this is a monstrous doctrine, and is not much improved in its more cynical form that any man can fill the post that he is clever enough to get. More might have been said for that in the good old simple days. But today the world is far too complex, and we must demand not only intelligence, but trained intelligence. He should remember, too, that most of the

complexity of modern life is due to the social and industrial revolution brought about by the applications of science, and that the business man who is not imbued with the scientific spirit is an anachronism. He was born in the seventeenth century, and has not yet outlived it. We have suffered too long from blundering amateurs, and must pull them out, root and branch. Then we must keep in view the dangers that arise from the spirit of extravagance that is so much abroad. It may easily drive us on the rocks. Most carefully must we keep an outlook for means of avoiding waste. I have little doubt that half the wealth of the next generation will come from new applications of science that will show us how to avoid waste in our industrial operations.

But even without any new applications of science there is much that might be easily avoided now, if only men were properly trained. I heard recently of a single instance. A "Tech" man was employed some time ago to administer a department of a great city. In a short time, by the adoption of scientific methods, he had given the city a better service and lessened the cost by a million dollars a year. Let us imagine that such a man is allowed by the politicians to continue this work for twenty years. Multiply the twenty millions of dollars thus saved by even a small fraction of the ten thousand men who are trained at the Institute in a generation, and you may form some estimate in dollars and cents of the value to the community of such an institution.

At the conclusion of Dr. Maclaurin's splendid address we heartily sang "Prexy for Aye." Then, as the final feature of the evening, moving pictures were shown of the stunts at Nantasket last June and of a *Technique* rush.

At the annual meeting of the club, held immediately after the dinner, F. G. Cox ('03) was elected governor for five years, representing classes '03 and later; and Harold Binney ('88), Ira Abbott ('81), K. Spalding ('89), Francis C. Green ('95), and R. S. Allyn ('98), were elected governors for one year, representing the club at large. The club *Annual* was distributed at the meeting, and will be mailed on application.

At the first meeting of the new board of governors, on February 15, the following officers were elected for the ensuing year: Harold Binney ('88), president; William H. King ('94), vice-president; Ira Abbott ('81), treasurer; and Francis C. Green ('95), secretary. Mr. Green was also elected representative to the Alumni Council.

On March 1 K. Spalding resigned from the board, and F. C. Schmitz ('95) was elected in his place. The following committees

have been appointed for the ensuing year: house committee, F. C. Cox ('03), chairman, J. J. Donovan ('06), R. Stresau ('04); membership committee, Walter Large ('79); entertainment committee, F. C. Schmitz ('95), chairman, T. I. Jones ('96), H. H. Kennedy ('05), R. E. Doane ('09); class reunions committee, R. S. Allyn ('98), chairman; library committee, Floyd T. Taylor ('03); committee on printing, C. M. Joyce ('03); committee on publicity and by-laws, William H. King ('94).

The board passed resolutions thanking C. M. Joyce for his accomplishments as chairman of the entertainment committee, Ira Abbott for his services as treasurer and K. Spalding for his work as chairman of house committee during the past year.

Mr. Joyce arranged for three notable smokers held this year. At the first, held on January 4, we had the pleasure of listening to Mr. William Lyman Underwood, president of the Technology Club of Boston, who gave us an entertaining talk on "Camera and Canoe in the Wilds of New Brunswick." Mr. Underwood exhibited some remarkable pictures taken by himself, mostly at night, in the woods; and the lantern slides which he had colored and prepared showed artistic execution. We hope he will be kind enough to favor us in the future with a talk on the subject which he originally contemplated, "Journeys with a Passamaquoddy Indian."

At the second smoker, on January 13, the club was fortunate in having present Professor Donald B. McMillan, who gave us a splendid lecture on "With Peary in the Arctic," illustrated by lantern slides from pictures, taken personally by Commander Peary and Professor McMillan, of interesting scenes and happenings on the journey. Professor McMillan is a delightful companion, looks like a Tech man, and we hope other Technology clubs will secure his presence.

The third smoker was on February 17, when Mr. J. V. Davies, chief engineer in charge of the Hudson tunnels, gave us an up-to-date talk on the equipment and operation of the tunnels and plans for future development of subways.

These smokers, attended by between 150 to 200 men, indicate some of the advantages of joining this club, to say nothing of the desirability of pleasant companionship which the club affords. Thus the pool tournament on Wednesday nights and the bridge tournament on Thursday nights have materially added to the

interest of the club, and will lead to similar tournaments annually. The governors have offered a bridge cup, and Mr. Binney has presented a pool tournament cup. The special dinners of classes and societies proceed merrily. Dr. Maclaurin attended the '89 dinner February 7, when fifteen men were present, and was made an honorary member of the class. The chemists had a glorious time at their dinner January 15, with special catering and a mysteriously beautiful menu card designed by F. C. Hiron, '03. The class of '94 was represented by eight men on January 17, and '02 by a dozen on January 24. The Tech Relay Team, here to compete at Madison Square Garden March 4, of course put up at our friendly hostelry. James P. Munroe, whose good judgment always leads him right, heads for our club-house when in New York, and eventually we expect to enroll as members all of the Faculty and Corporation. It was a pleasure recently to greet Professor R. H. Richards at the club-house.

The new "Publicity Committee" has changed the method of announcements, and, beginning in March, issued "Monthly Bulletin No. 1" containing notice of "Smoke Talk" and various news items and information of the club. The Bulletin issued announced a smoke talk, March 26, by Parker H. Kemble, on "Development of the Motor Car from 1600 to 1886."

The latest development here is the formation of an Advisory Council on Employment, at present comprising all the members of the board, with Francis C. Green as temporary chairman, by which eventually we hope, with the co-operation of the Alumni Association and by correspondence with firms and corporations and Tech men, to secure positions and promotions for our members. Another new subject of great interest is the proposed construction of a pergola for a summer garden in the rear of the club-house. J. Parker Fiske, F. C. Hiron, H. K. White, Noel Chamberlain and Ralph Howes comprise a committee of artistic talent and constructive ability, now engaged in formulating plans whereby we may have an attractive meet-place and dinner service "in the good old summer time."—*William H. King*, '94, "Publicity Committee," 17 Gramercy Park, New York City.

THE NORTH-WESTERN ASSOCIATION OF THE M. I. T.—At the annual meeting and banquet of the association, February 26, the following officers were elected: Frederick K. Copeland ('76),

president; Lonsdale Green ('84), vice-president; Meyer J. Sturm ('96), secretary-treasurer, 704, 84 La Salle Street, Chicago, Ill. These officers and the following men comprise the executive committee: John L. Shortall, '88; Charles W. Penn-Dell, '98; James I. Banash, '06. The new officers are planning for a very active year.

At the banquet there were between ninety and one hundred men present, who greeted Dr. Maclaurin, Professor Winslow and A. F. Bemis, president of the Alumni Association. President Hagar acted as toastmaster, and called on Professor Winslow, who drew a contrast between the ordinary education and the engineering education as developed at the Institute, pointing out that the industrial development of the country depended largely on men with special training.

Mr. Bemis brought the greetings of the parent Alumni Association, and gave a résumé of the work that is being done by the various local associations all over the United States and of the necessity for full co-operation to bring about the best results.

Dr. Maclaurin was then introduced. He presented to the men of the North-western Association the needs of the Institute in its various lines of activity. Dr. Maclaurin devoted some time to the question of a new site, which appeared to be the topic that had especial interest for all men present. In an informal way he spoke of the Faculty, the student body and of the alumni, showing what each was endeavoring to do and what could be accomplished in the future. Among the other things mentioned by Dr. Maclaurin was the desire of some of the students to form a 'varsity crew. He stated that he was much interested in this matter, and on being questioned made an estimate as to the cost of establishing such a crew. When he had finished his speech, he was given an ovation, and, as a climax, the entire amount mentioned by him to carry out the programme for the establishment of a crew was raised.

Our famous honorary member, "Johnnie" Hand, was present with ten assistants, and with their aid and the Reunion song leaflets there was plenty of good music and good cheer.

The visit of the musical clubs to Chicago marked a new era in Technology affairs in the central west. The superior character of the concert and the manner in which the young men carried themselves made a favorable impression on every one,

and their visit was of particular benefit to many of us who had not realized how much the Institute was doing for the social side of student life.

The concert was held in Music Hall, Fine Arts Building, February 3. The house was pretty well sold out, and all the boxes were occupied by a brilliant throng of friends of Technology. The boys were enthusiastically received, and the audience accepted everything they presented in a way that was most gratifying both to the clubs and to the management. During the performance "Mon" Sturges, with his old enthusiasm, led the cheering. Moving pictures of the Tech Reunion were shown during intermission, and there was a rapid fire of comment on the part of those who had attended the reunion and abundance of applause as the various features were recognized. There was a great burst of cheering when the picture of Professor Richards doing his rope stunt was thrown on the screen. Much amusement and pleasure was given when the moving pictures of the Technique rush were shown, which were especially interesting to the older men, who had never participated in anything of this sort.

The concert was an unqualified success, and too much cannot be said of the programme and of the concert and the way it was handled by the students. After the concert the boys were taken to the University Club, where a smoker was held in which the old-fashioned stein and sandwich, with pipes and plenty of good tobacco, figured largely. Some of the fellows were made to do their stunts over again, and the clubs rendered some of their musical selections. Members of the North-western Association joined heartily in the songs of Technology. John Shortall, who was manager of the first glee club at Tech, was asked to lead the assemblage in the rendition of old songs of former days, but, when it came to the yodeling, the audience balked, and John had to take it up as a solo.

The visitors were put up at the University Club while they were here, and practically had the run of things as they wished, from the swimming pool to the roof garden, and they expressed themselves as having had the time of their lives, which, they said, they were willing to repeat. The men of the North-western Association appreciated this, and can only say that they wish to have the opportunity of having them here again. The coming

of the boys to Chicago has increased the enthusiasm in the association, and has created a get-together feeling among the men, which will be of lasting benefit.

It will be the endeavor of the secretary-treasurer to get out a directory of the men connected with the North-western Association, and to issue from time to time bulletins to the members on such subjects as may be of interest. This can readily be accomplished, as the weekly luncheons, which are held every Thursday, are being well patronized, and the subjects of discussion at these meetings will be of interest to the membership. These luncheons are informal, and it is hoped that some permanent place of meeting can be secured during the present administration. The probability of raising money for this purpose will be thoroughly canvassed.—*Meyer J. Sturm, Secretary, 704, 84 La Salle Street, Chicago.*

WASHINGTON SOCIETY OF THE M. I. T.—Since the annual meeting in December the society has held two monthly informal dinners at the University Club and its annual banquet, March 3, at Rauschers', in addition to the regular weekly functions, the noonday lunch and the bowling night, which continue to retain their popularity.

The banquet, though not as large as those of recent years, was well attended, there being fifty-seven present, some of whom came from Baltimore and Annapolis, and was snappy from start to finish. The presence in the city of Mrs. Maclaurin was taken advantage of by arranging a reception immediately preceding the dinner hour, and she and Dr. Maclaurin, accompanied by Mrs. F. H. Newell, wife of the director of the Reclamation Service, stood for nearly an hour, in order that every one of the Tech men present might get just as well acquainted as he wished. After that the ladies withdrew, Mrs. Newell taking Mrs. Maclaurin to her home for the evening, and the music began. Caruso, Tetrizzini and other virtuosos—from a Victrola—had a hard time to hold the attention when R. B. Sosman ('04), the chairman of the committee of arrangements, discovered the piano and struck up the Stein Song, and from then on Orpheus ruled the feast, for one or the other was going every minute until the toastmaster hushed both.

Dr. Maclaurin spoke first, and after telling us that on his trip

to visit the various associations of Institute alumni scattered throughout the country he had found Tech men occupying positions of power and responsibility everywhere, and everywhere commanding respect, urged us to show our interest in our Alma Mater and further its advancement by impressing on the community in which we might happen to be located, by thorough work and earnestness of purpose, that these are its products. He commented on the "We are happy" yell, saying, "Tech is hell," and repeated the words of President Walker that "Tech is a place for men to work, and not for boys to play." Applied science must be founded on pure science, and to that end the research laboratory will play an increasingly important part at Technology, especially as, in the opinion of Dr. MacLaurin, this century will be pre-eminently the century of chemistry.

Charles Franklin Willard ('01), president of the society, officiated as toastmaster, and introduced in addition to Dr. MacLaurin, Hon. Edward B. Moore, commissioner of patents, Hon. W. C. Hawley, representative from Oregon, Hon. W. H. Wiley, representative from New Jersey, and Dr. A. L. Day, director of the geophysical laboratory, Carnegie Institution. Major Wiley, in his reminiscences of early days at the Institute, gave Professor Lanza credit for having made the first test to destruction of a full-sized beam, using as the breaking force the eight members of the class in applied mechanics, who had been stuffing themselves three meals a day for two weeks in preparation. Dr. Day paid a fine tribute to our Dr. A. A. Noyes, saying that he feared Dr. Noyes' worth as an original investigator in theoretical chemistry is not appreciated by Tech men as a whole, who know him only as the Acting-President, who has safely piloted the Institute through a period of uncertainty, while abroad, particularly in Germany, he is looked upon as the leader in American research, his articles alone of all American chemists being given serious consideration.

The bowling team has been a great success in keeping the younger men together throughout the winter. Twenty-one fellows, of classes from '94 to '09, have come out for practice, most of them being candidates for the team. Four matches have been rolled to date, two with a team composed of alumni of Purdue University, one against alumni of Armour Institute and one against a team from the Technology Club of Philadelphia.

Of these we won two and lost two, the most successful from the standpoint of attendance and enthusiasm being that with Philadelphia, March 5, which we won. The men taking part in this match were B. W. Cary ('06), C. A. Farwell ('06), A. H. Howland ('05), C. M. Draper ('07) and G. R. Jones ('07) for Washington, and Emerson (captain), Wiggin, White, McGowan and Terrell for Philadelphia. W. A. Hyde ('04), captain of the Washington team, did not roll. Cary made high single string, 188, and high three-string total, 464. The Washington team averaged 134.5, and the Philadelphia team 123, the total pin-fall being 2,018 and 1,846, respectively. About fifteen of our society witnessed this game, the first between clubs in different cities, and afterwards both teams and all the spectators pulled chairs around the long table in the little room at the Concordia Rathskeller and sang the entire répertoire provided by the Reunion song leaflet and the special sheet we got out for our banquet. We expect to send a team to Philadelphia April 2 to roll a return match and give them an excuse for a jollification.

The president of the Washington society, Charles F. Willard ('01), has resigned his position in the Patent Office and gone to Camden with the Victor Talking Machine Company as attorney in their patent department. We wish him well, and congratulate the Philadelphia club that what is our loss is their gain.—*A. M. Holcombe, Secretary, 1325 Vermont Ave., N.W., Washington, D.C.*

TECHNOLOGY CLUB OF BOSTON.—During the past winter the club has had an unusually good list of speakers for its "Club Smokers" and "Ladies' Nights." Nine talks have been held, to three of which ladies were invited, and it is expected that at least three more club evenings will be held before the season closes. The interesting character of the topics and their variety are shown by the following list: (1) Mr. S. K. Humphrey, "A Trip to Messina and French Africa"; (2) Professor Sedgwick, "The Present Crisis in American Education"; (3) Mr. Ernest Harold Baynes, "Wild Life in the Blue Mountain Forest"; (4) Hon. Arthur P. Stone, "Juvenile Crime"; (5) Professor T. A. Jaggar, Jr., "Earthquake and Volcanoes in Japan and Hawaii"; (6) Desmond FitzGerald, Esq., "Scenes and Travels in Many Lands"; (7) Professor Derr, "A Trip through the Pacific North-

west"; (8) Thomas Barbour, Esq., "Travels in Chile, Peru and Bolivia"; (9) Professor Harrison W. Smith, "A Journey to the Malay Archipelago." All of the travel talks were illustrated by the lantern, and a great many unusual and beautiful pictures have been shown during the year.

Although the attendance at club entertainments has been good, the house is not used at other times as freely as could be wished. While the club is able to meet its current expenses, the revenues are not enough to justify expenditures for anything except the absolutely necessary repairs and improvements. No steps have been taken toward the retirement of the mortgage bonds on the house, which become due next year. An attempt to increase the income by a slight raise in the price of meals proved unsuccessful, so the original prices have been restored. An increased membership in the club and a greater use of the house and its privileges by the present members are both needed to put the club on a sound financial basis. Any suggestions as to ways in which the club can best be useful and attractive to its members and their friends, as well as to visiting alumni, will be cordially welcomed by the executive committee.—*Robert S. Williams, Secretary.*

TECHNOLOGY CLUB OF PHILADELPHIA.—The annual business meeting and election of officers of the Technology Club of Philadelphia was held on Saturday, February 19, at Hanscom's. The following officers were elected for 1910: president, James Swan ('91); vice-president, Frank H. Keisker ('97); secretary-treasurer, Percy E. Tillson ('06); executive committee, Frederick A. Hunnewell ('97), Edgar P. Trask ('99), Eugene S. Foljambe ('01), George M. Spear ('02), H. LeRoy Walker ('05), William H. Blakeman ('05). After an excellent dinner had been served, the club attended Keith's Theatre in a body. It was the best attended and most successful meeting that the club has had for several years.

On March 5 the bowling team met the team of the Washington society at Washington. The Washington team was the victor, winning two out of the three games played, but in all other respects the Washingtonians were ideal hosts, and the visitors had a royal good time. The team consisted of Emerson ('06), McGowan ('08), Terrell ('06), White ('06) and Wiggins ('05).

On April 2 and May 14 informal dinners will be held at Hancscom's, and on the former date the Washington bowling team will play a return match at Philadelphia. The annual field day will be held as usual in the early part of June.—*Percy E. Tillson, Secretary, 436 Y. M. C. A. Building, Philadelphia.*

TECHNOLOGY CLUB OF BUFFALO.—The first informal dinner of the year was held on January 11 at the Hotel Broezel, of which Eagan ('06) is the proprietor. Election of officers under the revised constitution resulted in the choice of H. A. Boyd ('79), president; W. H. Watkins ('95), secretary; C. B. Morey ('06), treasurer.

The sample lot of Tech students sent us in the form of the musical clubs, and which we displayed at a concert and at a University Club Smoker on January 31, proved a revelation to the people of Buffalo and filled the breast of every old Tech man with honest pride and enthusiasm.

The visit of the clubs was a complete success in every particular.

While still feeling pretty cocky over the showing made by the musical clubs, we had a bad scare thrown into us by the basket-ball team, which played Canisius College here on February 4. At the end of the first half, with the score 16 to 9 against Tech, fifteen cents would have bought the whole Technology Club of Buffalo. The second half, which finished 24 to 20 in favor of Tech, put us up to par once more, and we finished the evening with a German supper at the Teck Café.

We were much gratified at the opportunity of meeting Dr. and Mrs. Maclaurin on February 21. A jolly time was had at a reception and dinner at the Hotel Iroquois with ladies present. Dr. Maclaurin in his talk showed such an understanding of Tech needs and Tech ideals that every member present felt satisfied that the Institute had a President who will make good.

The club holds informal dinners monthly at the Broezel Hotel on the second Wednesday of every month, and as many men as can get together for lunch on Tuesdays at the Teck Café at 1 P.M. —*W. H. Watkins, Secretary.*

TECHNOLOGY CLUB OF THE MERRIMACK VALLEY.—The annual meeting of the club was held at the Yorick Club, Lowell, on Friday evening, February 4. Officers for the year were elected,

as follows: president, George A. Nelson ('77), Lowell; vice-president, James A. Lanagan, Jr. ('94), Lawrence; treasurer, William O. Hildreth ('87), Lowell; secretary, John A. Collins, Jr. ('97), Lawrence; member executive committee, Paul B. Wesson ('98), Lowell; representative to Alumni Council, John C. Chase ('74), Derry Village. There were thirty-one members present, representing seventeen classes, ranging from '74 to '09.

Dinner was served at seven o'clock, after which Mr. Isaac Litchfield ('85) spoke of the good work which was being done by the alumni for the Institute and put forth a strong plea for its continuance. During the evening a telegram of greeting was sent to the Technology musical clubs who were at the time giving a concert in the Auditorium in Chicago.

Plans are now being made for a fall meeting, probably at the Vesper Country Club, Lowell, and, if the proposed arrangements are perfected, there will surely be some very novel features. The club has a membership of about eighty-five and a mailing list of one hundred and fifty.—*John A. Collins, Secretary, Lawrence, Mass.*

TECHNOLOGY CLUB OF ROCHESTER.—Nineteen former students of the Massachusetts Institute of Technology assembled at Powers Hotel in Rochester Jan. 4, 1910, primarily for the discussion of the proposed concert of the musical clubs; secondarily, to consider the formation of a club and incidentally to get dinner. The discussion of dinner being satisfactorily completed, the objects of the meeting were stated, and after consideration it was agreed to support the musical clubs and form the proposed organization. Mr. Lovejoy was elected temporary chairman and Mr. C. C. Culver temporary secretary.

Further discussion indicated considerable enthusiasm, particularly concerning the organization of a club of Technology men in Rochester, and ultimately resulted in the appointment by the chair of Messrs. O. K. Foote, J. H. Haste, B. C. Hopeman, C. F. Wray and L. F. Meyers as a committee to draft a constitution and by-laws to be submitted and also to prepare nominations for officers.

The chair also appointed Messrs. A. F. Sulzer, H. O. Stewart, C. F. Wray, M. H. Eisenhart, G. Fuller, C. C. Culver, B. C. Hopeman and J. F. Ancona and the chair as a general commit-

tee to arrange for the concert, provided a suitable date could be obtained. Mr. H. O. Stewart, a graduate of the University of Rochester and the Massachusetts Institute of Technology ('09), was requested to obtain what information he could concerning the co-operation of the University of Rochester.

The meeting adjourned at a reasonable hour in a respectable condition, after having agreed to meet on Jan. 18, 1910, at the same place and hour.

Preceding the next meeting, assurance was obtained of a definite date. The University of Rochester generously allowed the use of the Alumni Gymnasium for the concert, and the general committee began to get arrangements in shape.

The next dinner was attended by twenty-two men, several being new-comers, while a few of the men present at the previous dinner were unavoidably absent. The constitution and by-laws prepared by the committee was read and adopted, followed by the election of the nominees, proposed by the same committee. Mr. C. C. Culver, temporary secretary, cast one ballot, and duly declared the following men elected to the offices stated: president, William E. Hoyt ('68); first vice-president, Frank W. Lovejoy ('94); second vice-president, A. S. Crocker ('97); secretary and treasurer, J. F. Ancona ('03); executive committee for three years, O. K. Foote ('80); executive committee for two years, F. A. Cole ('91); executive committee for one year, C. F. Wray ('95).

In the absence of Mr. Hoyt, Mr. Lovejoy presided, and a report was made of the details concerning the coming concert. The general committee and sub-committees of the same had had time enough to look out for many things, and it was possible to distribute tickets, place seats on sale, arrange for the entertainment of the musical club members, etc.

The use of the Alumni Gymnasium made it possible to follow the concert by a dance, so that this form of diversion was arranged for as being suitable and entertaining, giving the boys an opportunity to meet the ladies who were to be their hostesses for the night.

Those present were C. C. Culver ('96), A. F. Sulzer ('01), W. P. Cross ('03), F. A. Cole ('91), H. H. Tozier ('96), W. C. Bent ('05), C. Spiehler ('08), F. Line ('06), E. W. Hammond ('00), S. C. Allen ('06), M. H. Eisenhart ('07), V. M. Palmer ('03), C.

Wray ('96), L. F. Meyers ('03), B. C. Hopeman ('00), J. C. Dryer ('99), Harold O. Stewart ('09), O. K. Foote ('80), G. Fuller ('05), W. S. Lucey ('07), F. W. Lovejoy ('94) and J. F. Ancona ('03).

The concert and dance passed off in a most successful manner. The work of the clubs was appreciated and very favorably commented on by those present, the selections of the mandolin club creating special comment from a number of unbiassed persons. The Gymnasium was prettily decorated in red and gray, together with a large "Technology" banner above the stage and a profusion of small pennants overhead. Dance music was provided by Dossenbach's Orchestra. Special effort was made by members of the local club to see that the visitors were provided with partners for the dances, and it is believed that this was satisfactorily accomplished.

Following the dance, which ended about 1 A.M., the various Rochester men took their guests home for a good night's sleep. On comparing notes with others, the secretary finds that in a great number of cases it was almost necessary to break in the door panels the next morning to awaken the men in time for their nine o'clock train.

All those who were fortunate enough to be able to entertain were enthusiastic concerning their guests, enjoyed their company immensely, and hope to be able to have the pleasure again.

The Technology Club of Rochester, not being on the alumni map, so to speak, although it yet "has hopes," found that it was impossible to arrange with Dr. Maclaurin to give us an evening in Rochester on his recent trip through Syracuse, Buffalo *et al.* However, our first vice-president, Mr. Lovejoy, had arranged to attend the Syracuse festivities on Saturday evening, February 19. As to what transpired in Syracuse, the secretary is ignorant. He knows, however, that on Sunday morning, while reading the papers in a decided negligée, he was called to the 'phone by Mr. J. H. Haste, with whom Mr. Lovejoy had been talking on the long-distance 'phone, and was told that Dr. Maclaurin and Mrs. Maclaurin would stop off in Rochester that evening for three hours and a half.

To be brief, sixteen "Tech" men out of thirty-four met the President and his wife at a most pleasant and enjoyable dinner at the Hotel Seneca. President W. E. Hoyt ('68) presided, intro-

ducing Dr. Maclaurin, Mrs. Maclaurin being entertained by the wives of the officers.

Every one present welcomed the opportunity to meet the new President and to hear him speak of the Institute. His remarks, although necessarily brief, owing to the limited time, were attentively followed and exceedingly interesting to all.

The dinner was concluded by Mr. Hoyt thanking Dr. Maclaurin on behalf of the club for his kindness and consideration in stopping over, which must have entailed some personal inconvenience.

Credit is due Mr. J. H. Haste and Mr. A. S. Crocker, assisted by Mr. O. K. Foote, A. F. Sulzer and Mr. C. F. Wray for the expeditious dinner arrangements.

The club expects to hold two more meetings before the summer, one in March and one in May.

Of the thirty-four present members, five are yet at Tech as undergraduates, they being Rochester boys.

The intention of the club is to extend membership, if so desired, to all undergraduates from Rochester.—*J. F. Ancona, Secretary.*

M. I. T. CLUB OF CENTRAL NEW YORK.—The M. I. T. Club of Central New York started the new year most auspiciously in being the first association favored by a visit from President Maclaurin on his recent trip.

The President and Mrs. Maclaurin arrived in Syracuse early in the evening of February 19. Later Dr. Maclaurin gave a very instructive address on "Academic Efficiency" under the auspices of the University Club of Syracuse, which club very kindly tendered us its rooms for the occasion.

The meeting was very largely attended by the friends of the M. I. T. Club and members of the University Club, every one expressing his pleasure at the opportunity of hearing our new President and meeting the doctor and his wife informally after the address. From the University Club the President was escorted to one of the local hotels, where he was the guest at an informal lunch amidst a liberal display of Tech flags, yells and enthusiasm.

We were very much interested listening to the latest news from Boston regarding the possible relocation of the Institute and the various schemes on foot to advance the welfare of Tech. The

meeting was well attended by our out-of-town men, Oswego, Utica, Rome, Binghamton, Ithaca, Auburn, Rochester, Chicago, Ill., being represented, as well as our local contingent of thirty almost to a man. The following day Dr. Maclaurin left for Buffalo, making a short stop at Rochester *en route*.

On December 13 the club met at the home of the secretary, where various plans were discussed for disseminating Tech atmosphere and ideas to the prospective college men of the surrounding territory. It was decided to request the Institute authorities to furnish the club with names of any such men desiring catalogues, information, etc., whereupon one or two members were to be assigned to follow up each one with personal attention, the club hoping thus to send a larger proportion from this section to Boston than heretofore.—*Harry N. Burhans, Secretary.*

TECHNOLOGY CLUB OF NEW BEDFORD.—The ability of Tech men to surmount unusual difficulties was never better exemplified than at the annual dinner of the Technology Club of New Bedford on Friday evening, January 14. The dinner was held at the New Bedford Country Club, two and a half miles from the centre of the city. A combination of mishaps put the members on their mettle.

First of all, the worst storm of the season came that day, so that the plan of taking the members out in automobiles had to be given up. However, a sleigh was provided to take them from the car to the club, a distance of a quarter of a mile, but the sleigh and four horses failed to buck the drifts successfully, and we had to resort to walking.

Second, because of the storm President Maclaurin, the guest of the evening, missed his train from Boston, and did not arrive until after eight o'clock. A car off the track on the electric line held him up, so that he did not reach the road to the Country Club until half-past nine, when he found no sleigh waiting for him, as it had gone back to town. The President was game, however, and, procuring a pair of rubber boots, marched through the drifts into the Country Club, arriving there about ten o'clock. He was met by a rousing Tech cheer by the twenty-two men present.

The dinner passed off happily, the only speaker being President Maclaurin, who told about what was being considered for the

future at Tech. At 12.30 the members ploughed back through the snow to the waiting car, and it was the unanimous verdict that it was a meeting long to be remembered.

President Pierce presided, and the members of the dinner committee were Pierce, Nye, Braley, Wade and Wing.

The members of the club caught hold of a suggestion made by President Maclaurin at the January banquet, to the effect that we get in touch with the most promising young men in and about our city and tell them something about Technology. With this end in view, arrangements have been made with the Technology Glee Club to give a concert in New Bedford April 15. The two upper classes of the high school will be invited, and there will be a dance after the concert.

The club had a meeting at the New Bedford Yacht Club on the evening of February 25, and enjoyed a clam-broil. Eighteen members were present, and spent a very pleasant evening. Mr. Charles R. Allen gave a talk on the problems and hopes of the new Industrial High School. It was voted to try to get the Tech Glee Clubs to come to New Bedford for an entertainment, and a committee, consisting of Messrs. Charles R. Allen, S. C. Hathaway and C. F. Wing, Jr., was appointed to see what could be done. Those present were: Pierce, Hammond, Lawton, Allen, Nye, Dowse ('74), Whiton, Hathaway, Tripp, Stetson, Wade, Faunce, Anthony, Hinckley, I. M. Chase, R. D. Chase, C. Wing, Lennox.—*Charles F. Wing, Jr., Secretary.*

DETROIT TECHNOLOGY ASSOCIATION.—The Detroit Association has only been in existence eighteen months, but it has been very active during this time, and the interest in Technology has been increased remarkably in this part of the country.

Dr. Maclaurin's visit, February 22, brought together thirty men, who gave the President an old-fashioned welcome. Dr. and Mrs. Maclaurin arrived here at noon. Mrs. Maclaurin was entertained at luncheon in the afternoon and at dinner in the evening by the wives and friends of Tech men in Detroit. Dr. Maclaurin addressed the club on "Academic Efficiency." During the evening a Scotch piper, in full Highland costume, played the airs of Scotland in honor of our guest.

The following members were present: O. W. Albee, '93; G. R. Anthony, '98; Frank C. Baldwin, '90; Edward M. Bragg, '96;

James P. Buckley, '93; F. B. Choate, '91; Frank R. Cook, '96; George Cook; L. Eugene Emerson, '97; Emmett J. Dwyer, '05; Marvin Gorham, '93; Charles F. Hammond, '91; H. E. Hathaway, '91; William R. Kales, '92; Currier Lang, '04; H. G. Lobenstine, '92; Emil Lorch, '93; Herbert I. Lord, '98; Allen Loomis, '99; Walter M. Newkirk, '92; George W. Patterson, '87; W. C. Reed-Hill, '94; Waldemar S. Richmond, '05; A. Forrest Shattuck, '91; Preston M. Smith, '05; W. R. Strickland, '98; Edward A. Sumner, '97; Granger Whitney, '87; Oric O. Whited, '07; James S. Rogers, '81.

Our association numbers fifty-eight in Detroit, eight at Ann Arbor, nine at Toledo and eight in near-by towns, making a total of eighty-three members. That much interest is taken in the work of the association was shown by the fact that forty-eight subscribed to the concert of the musical clubs, which was given in the Church of Our Father, February 2. We hardly feel justified in saying that we entertained the musical clubs, for, as a matter of fact, they entertained us from start to finish. A member of the audience remarked, very justly, that they looked like a lot of young men with a purpose in life. We had an audience of between seven and eight hundred, and the concert went off smoothly and gave evidence of careful and systematic work.

Upon their arrival the men were taken to the University Club, where they made their headquarters. After the concert we all returned to the University Club and had a smoker, about twenty of the alumni and several members of the University Club remaining during the evening. The success of the concert was largely due to the aid of Mr. L. S. Partridge, whose son is a member of the mandolin club. Through his efforts a very large number of tickets were sold to high-school students and their families and friends.—*Granger Whitney, Secretary.*

TECHNOLOGY CLUB OF THE CONNECTICUT VALLEY.—In the absence of President Maclaurin, the newly appointed head of the Massachusetts Institute of Technology, Eben S. Stevens, '68, of Quinebaug, Conn., made the chief address before fifty alumni of the Boston Institute in the Massasoit House, February 26. The Tech Association of the Connecticut Valley gathered in numbers and enthusiasm for their yearly get-together, and visitors were present from Hartford, Waterbury, Boston, Hol-

yoke and other cities of the district. Preceding the banquet, an informal programme was given, and the whole assembly sang Tech songs.

Not since 1907 has Springfield been honored by the presence of this body of former Tech students, the two reunions prior to this year's having been held in Hartford. The committee of arrangements made careful preparation for the event in all its details. At 7.30 o'clock they met in the hotel, and held a brief business session. In obtaining attractions for the post-prandial proceedings, the committee was successful in securing the services of several members of the Cohan and Harris Minstrel Troupe, including George Evans, who entertained the crowd after the speech-making of the evening.

George L. Munn, of this city, presided. The first toast, "Technical Men and Railroad Work," was responded to by George L. R. French, of Boston, Class of '84, formerly of Springfield, who is superintendent of the terminal division of the Boston & Maine Railroad. Mr. French was formerly superintendent of the Connecticut River division of the road, and lived in this city. George N. Baker, secretary of the Hartford Technology Club, spoke on "The Summer Travels of a Technical Man," and Clarence E. Whitney, of Hartford, Class of '91, spoke on "The Technical Man in Manufacturing."

George W. Baker, of Hartford, is president of the association, and Edmund P. Marsh, of this city, secretary and treasurer. With a membership of three hundred, the organization is one of the strongest and most prominent alumni associations in New England. The committee in charge of the reunion was composed of the following members: George L. Munn, N. P. A. Carter, Edmund P. Marsh, Harry G. Fisk and Frederick W. Fuller, Springfield; Eben S. Stevens, Quinebaug, Conn.; Henry M. Chase, Holyoke; William L. Root, Pittsfield; S. Elsworth Horton, Windsor Locks, Conn.; Clarence E. Whitney and George W. Baker, Hartford; Darrah de Lancey, Waterbury, Conn.; and Philip Stanley, of New Britain, Conn.—*Springfield (Mass.) Union*.

KANSAS CITY.—We had a very delightful visit from Dr. MacLaurin February 24, when he stopped at Kansas City on his way to the dedication of Lawrence University at Lawrence, Kan. Mr.

W. S. Hoit, '97, took the matter in hand, and arranged all the details for the entertainment of the President.

In the afternoon he was given a view of the city in an automobile, and in the evening attended a dinner at the Kansas City Club, where about twenty-five of the alumni met him. The other guests were Judge Porterfield, judge of the Juvenile Court, Judge H. L. McCune, Judge Porterfield's predecessor, Mr. Frank Faxon, who is connected with the public school board of Kansas City, Professor Perkins, of the Manual Training School, and Mr. Bemis, president of the Alumni Association. R. E. Richardson, '85, acted as toastmaster.

Dr. Maclaurin gave us a good talk on the proposed future of the Institute and what is to be done to secure a new site and new buildings. On account of the lateness of the hour the meeting adjourned, and no steps were taken toward forming a Technology club here. There are a considerable number of men in this vicinity, and it is our intention to form a local Technology association, and put Kansas City on the alumni map.—*R. E. Richardson, '85.*

TECHNOLOGY CLUB OF RHODE ISLAND.—About forty members of the club met at the University Club April 1, to greet the President of the Institute and to resuscitate the organization, which has not been active for the past two or three years.

After the dinner and previous to the speaking the club elected the following officers: president, James E. Woolworth ('78), Providence; vice-president, Charles S. Tillinghast ('95), Providence; secretary-treasurer, William C. Dart ('91), Providence; member of Alumni Council, E. B. Homer ('85), Providence. The retiring vice-president, Mr. Kenneth Wood, introduced the new president, who took the chair, presiding during the evening.

Dr. Maclaurin pointed out that the Institute was never in better financial condition than at the present time, and that the Institution had no debts. He referred to the necessity for a new site and buildings and the effort that should be made to secure the necessary funds. He spoke most impressively of the national character of the Institute, citing facts and instances that were new to most of the men present. He referred to contemplated courses in business administration, which, he hoped, might be soon undertaken, and also to the fact that one-seventh of the

freshman class had elected to take the course in chemical engineering. Dr. Maclaurin stated that the test of loyalty of the alumni was productive work for the Institute, and from the temper of the audience it seems likely that the Rhode Island Club will prove its right to the title.

Lieutenant Governor Z. W. Bliss ('89) seconded the suggestion of Dr. Maclaurin, and made a plea for active work on the part of the club.

I. W. Litchfield, of THE TECHNOLOGY REVIEW, told about student initiative, and showed the influence that the students and alumni were having on the development of the Institute.—*W. C. Dart, Secretary-Treasurer.*

CINCINNATI M. I. T. CLUB.—The swing around the circle of President Maclaurin and President Bemis of the Alumni Association, awakened a great deal of interest among the alumni in Cincinnati. They were at Cincinnati on the evening of February 28, and were entertained by a dinner given at the Business Men's Club, where about twenty-five Tech men assembled to greet them. Much interest was evinced in the remarks of both men, and it is hoped that these annual visits will become a fixed custom. The relation of the alumni administrative offices to the local clubs was carefully discussed at the dinner. It was quite apparent that interest had been aroused in the matter of closer relation between the main Association and its various branches.

The following officers of the club were elected: E. J. Carpenter, '72, president; Herman W. Lackman, '05, secretary.

The death of Mr. Joseph S. Neave was a great shock to the people of Cincinnati, and his loss will be keenly felt among the Tech men in this city. At a meeting of the club, held March 22, the following resolutions were adopted:—

Whereas the Cincinnati M. I. T. Club has lost by the death of Mr. Joseph S. Neave an esteemed member who was the first president of the club, be it

Resolved, That each member keenly realizes with great sorrow the loss of a fellow-student and a friend;

Resolved, That in his death the Institute loses a representative graduate of whose high character it may be justly proud;

Resolved, That our city loses a most valuable citizen, whose faithful and unselfish service in the past was a warrant of greater usefulness in the future;

Resolved, That these resolutions be spread upon the minutes of the Cincinnati M. I. T. Club, and a copy of the same be forwarded to Mrs. Neave and also to the Alumni Association of the Massachusetts Institute of Technology at Boston.

TECHNOLOGY ASSOCIATION OF NORTHERN CALIFORNIA.—The association here is still growing, and on account of the increased Hub news we get from time to time we feel that Boston is not so far away from us as it used to be.

We are devoting our chief energy to make a success of our Monday luncheon and also a series of social evenings which are partly devoted to dancing.

The first dinner of the association will be held March 4.—*H. C. Blake, Secretary-Treasurer, San Rafael, Cal.*

TECHNOLOGY CLUB OF NORTHERN OHIO.—The visit of President Maclaurin on March 1 last was the event of the club's career. The organization seemingly was suffering from an attack of sleeping sickness, and was in a fair way to disappear, when the arrival of Dr. Maclaurin and President Bemis of the Alumni Association revitalized the association.

Dr. and Mrs. Maclaurin arrived in the afternoon from Cincinnati, and were entertained at a dinner at the Union Club by Mr. and Mrs. A. W. Johnson, Mr. and Mrs. F. B. Richards, Mr. and Mrs. Frederick Metcalf, Mr. and Mrs. James Ritchie, Mr. and Mrs. George Bartol. Dr. Charles S. Howe, president Case School of Applied Science, and Mr. and Mrs. A. K. Mansfield, of Salem, Ohio, were also guests.

Afterwards the ladies were tendered a box party at the Opera House, and the gentlemen went to the University Club, where some forty Tech men were gathered for an informal smoker.

After greeting all present, Dr. Maclaurin spoke to us interestingly about the Institute, giving us the opportunity of better acquaintance with him by expressing his views clearly and straightforwardly on many Tech matters.

President Bemis, of the Alumni Association, was called upon, also Dr. Howe and Professor Mabery, of Case School.

At the business meeting following, Professor H. B. Dates was chosen president of the club, R. B. Wallace vice-president, and Sidney Y. Ball secretary. President Dates at once appointed

C. W. Ricker, F. R. Walker and George T. Glover a committee to arrange for a dinner to be held at an early date.

J. E. Kreps, '87, was chosen to represent the club upon the Alumni Council.

Five members of the Akron Association were present.

A great industrial centre, such as Cleveland is, will naturally attract a great many Tech men, and it seems certain that the 150 alumni of the Institute in northern Ohio should produce a very healthy, active association.

M. W. Greer, formerly of Cleveland, but now a resident in the 164th Ward of Seattle,—as he describes Tacoma,—and also secretary of their association, has spent the past few weeks with old Tech friends in this city.—*Sidney Y. Ball, Secretary, Cleveland, Ohio.*

A Technology Crew

At the recent dinner of the North-western Association at Chicago nearly \$600 was raised on the spur of the moment to form a foundation for the purpose of establishing a crew at the Institute, as suggested by Dr. Maclaurin.

The students immediately took the matter up, and about sixty men responded to the call for material for a 'varsity crew. Ward M. Gere, '11, formerly on the Syracuse 'varsity eight, was elected captain, and A. G. Herreshoff, '12, was made manager.

The men immediately went into training with the weights at the gymnasium and with the rowing machines at the Union Boat Club, where arrangements for quarters have been made.

President Hugh Cabot of the Union Boat Club and Coach O'Leary recently cut the squad to forty, and it is understood that the Tech eights will be in the water about the time the REVIEW goes to press. Rented shells will be used for practice until a shell can be purchased.

ANNUAL ALUMNI DINNER

Alumni Association has a Balance of \$3,000—Speeches by President Maclaurin, President Lowell and Dr. Snedden

The annual dinner of the Alumni Association of the Institute was held at the Hotel Somerset on the evening of January 19, about three hundred being present. The small tables were set for six, the tables being grouped by classes. Edwin S. Webster, '88, retiring president of the Association, presided, with President R. C. Maclaurin in place of honor at his right and President A. L. Lowell, of Harvard and the Corporation, on his left. Others at the head table were: W. S. Hutchinson, '92, of the executive committee of the Association; H. L. Doherty, a prominent New York engineer; F. C. Green, '95, representing the Technology Club of New York; Colonel T. L. Livermore of the Corporation; Professor C. F. Park, '92; Dr. David Snedden, Commissioner of Education for Massachusetts; A. F. Bemis, '93, president-elect of the Association; F. P. Fish, of the State Board of Education; W. B. Thurber, '89, Treasurer of the Institute; J. P. Munroe, '82; Walter Humphreys, '97; H. L. Coburn, '98; W. S. Johnson, '89; Mrs. William Barton Rogers and Mrs. Richard C. Maclaurin.

In introducing the post-prandial programme, Mr. Webster made a brief statement in regard to the finances of the Association, and stated that, although the expenses of the last Reunion exceeded the receipts by about \$3,000, a guarantee fund had been raised amounting to \$6,000, and that \$3,000 had been turned over for the Association Fund. Announcement was made of the election of Francis R. Hart, '89, to life membership on the Corporation. In regard to a new site Mr. Webster stated that nothing had yet been decided upon, but, when the decision was reached, the alumni would be expected to assist the President in securing the large sum needed.

In referring to the question of a new site, President Maclaurin said:—

Tech may expect to be storm-tossed, but is quite used to it. You realize its present difficulties and dangers, all of which arise from the same cause, a lack of adequate financial support. We work in a field requiring much expenditure in marked contrast to the older forms of education. In addition, every department is constantly pressed to set out in new directions. This is the penalty we have to pay for being really live and scientific.

Our very special problem is that of obtaining a new site. There has been so much talk of this that some of you may have expected to come here to hear of the definite choice of the site, but I cannot imagine how any Technology man can have any reasonable idea of such an announcement. To acquire any of the sites suggested will require several millions,—not a sum to be easily obtained.

It may be that we shall have the good fortune to get help from some of the really rich men of the country, but that solution is clearly uncertain. We can only hope to solve our problem by a great display of patience, possibly for years, in educating the community to our special needs and our usefulness to that community. Tech could not die, even if it wanted to. Schools of applied science have come to stay. Never was our position better established, never have we had a better Faculty or been so well off financially. We need more assets, but with your help surely we will get them.

President Lowell of Harvard was heartily received. He said in part:—

There has been a feeling in America that its educational institutions were rivals, and they are in a sense; but the success of one does not injure the prestige of the other, even if these institutions are close together. Rogers founded Technology in Boston because he considered the best field a place where education was already abundant.

We are all on the same side, but let us never forget the means to the end,—the welfare of our country and mankind. We must look not only to the education of the youth, but to what we can do as graduates for our country; and one of the greatest things a graduate can do is to pay strict attention to the needs for a permanent civil service. The lawyers have long had a professional civil service, but the same cannot be said of the engineers.

Has the engineering profession established its hold on the community so that it turns to it when it is confronted with strictly engineering problems? Is this not one of the defects of our municipal governments? The municipal problems which are coming up today are largely on the recruiting of a permanent civil service from experts skilled in the task of solving these problems and of the vastly greater problems, the scope of which

no man can tell, which will come up later. Is it not to the graduates of Tech, backed up by the graduates of other technical schools, that we must turn for the solution of this problem? Harvard and Technology must stand together through thick and thin through all this work.

In concluding his speech, President Lowell made an amusing reference to the recent relations between Harvard and Technology, telling the story of the man who asked his friend the difference between a seraphim and a terrapin. His friend replied that he did not know exactly; he thought there had been a difference at one time, but he understood that it had been satisfactorily adjusted.

Dr. David Snedden, State Commissioner of Education, made a plea for the development of the men who are to form the rank and file in the industrial progress of America. He said:—

The day has gone by when the father could pass on to his son teachings enabling him to become a success. We are well supplied with schools for the training of the captains of the industrial army, but now it is desirable to develop means of training the high privates in this great army. From the social point of view the demand for vocational schools for the rank and file at the present time resembles that which prevailed some decades ago for the development of the higher institutions. It is rapidly becoming a fact that older agencies of vocational training—the home, the workshop and the guild—are no longer as effective as they once were, and there is an increasing belief that the public school system must be extended to include training for productive work as a part of its mission, if we are to retain a high standing among the industrial nations of the world.

Getting Closer to the Faculty

The Institute committee and *The Tech* have instituted a campaign for bringing the professors and students together socially, so that they may become better acquainted. It is arranged to hold a social meeting of this kind on Friday, April 8, in place of the regular Union entertainment. It is interesting that the first movement came from the student body, and it has been received favorably by a large number of the Faculty.

MR. GUNN SUCCEEDS PROFESSOR WINSLOW

Announcement is made of the appointment of Selskar M. Gunn, '05, to take, in part, the place made vacant by Professor Charles-Edward A. Winslow, Assistant Professor of Sanitary Biology.

After being graduated from the Institute, Mr. Gunn spent nearly a year as assistant to Professor Prescott in the Boston Biochemical Laboratory, where he obtained considerable training in industrial biology. During the same year he also acted as assistant to Dr. A. W. Weyssse, of the Boston University Medical School. In 1906 Mr. Gunn became first assistant bacteriologist to the State Board of Health of Iowa, located in Iowa City; he was also lecturer on hygiene at the Iowa State University. Here he had practical charge of all bacteriological examinations for the state, amounting to many thousands each year, and was also called upon to make investigations of epidemics of various kinds. He had an opportunity to develop the course in hygiene in the medical school of the university, and besides the didactic work gave a laboratory course in applied sanitary bacteriology and chemistry. Early in 1908 he was called to the position of health officer of the city of Orange, N.J., which position he still occupies. Through his efforts the efficiency of the health department of the city of Orange has been greatly increased.

Although a young man, Mr. Gunn has made his mark in the profession, and has been invited to give a large number of public addresses and papers, the most important having been presented before the American Academy of Medicine, New Haven, the New Jersey Sanitary Association, the New Jersey State Conference of Charities and Correction and the International Tuberculosis Exhibition in New York. Mr. Gunn has on the press two papers on different phases of infant mortality, which will be published in the Journal of the Academy of Medicine and the Proceedings of the New Jersey Sanitary Association.

NOTES OF THE INSTRUCTING STAFF

Dr. Robert H. Richards recently read papers before the American Institute of Mining Engineers at Pittsburg and the Canadian Mining Engineers at Toronto. In a report of the meeting the *Iron Age* says:—

Professor Robert H. Richards, of the Massachusetts Institute of Technology, Boston, presented a paper on the "Development of Hindered Settling Apparatus," tracing the steps in the study of classifiers for concentrating ores, which have led to development of the apparatus, of which he is the inventor. Professor Richards, who is our foremost authority on ore concentration, has obtained truly wonderful results with machines which are remarkable for their simplicity and which depend for their operation upon "hindered settling" or upon the "teetering" of particles of material in currents of water. While chiefly applied thus far to lead and copper ores, the apparatus is likely to obtain more extended application in the dressing of iron ores, which is being more widely introduced in this country.

Professor R. A. Daly, of the Geological Department, gave five lectures to advanced students in the Geological Department of the University of Wisconsin in January on the subject of Igneous Rocks.

Professor Davis R. Dewey will give a course in Economics at the summer session of Columbia.

Charles H. Warren, Associate Professor of Mineralogy, recently gave an address before the Engineering Society of Queen's University, Toronto, on Calcium Carbide.

Professor H. O. Hofman has been appointed by the Secretary of the Treasury to investigate the losses in lead endured in the smelting of lead ores and the refining of base bullion, with a view to levying the right amount of duty upon ore and bullion imported into the United States for treatment. Professor Hofman has visited the works of the American Smelting and Refining Company, situated at Perth Amboy, N.J., South Chicago, Ill., El Paso, Tex., and the smelting and refining works of the Balbach Company at Newark, N.J. The report made upon this investi-

gation has been accepted both by the United States Treasury and the smelting companies interested. On his way to El Paso, Professor Hofman stopped over at St. Louis, and made a study of the works of the St. Louis Smelting and Refining Company and the Federal Lead Company.

Professor F. W. Chandler, of the Department of Architecture, has been granted a leave of absence from his duties at the Institute, and will spend the remainder of the college year in Italy and France. His course of lectures on business relations will be given by Professor Desire Despradelle, Guy Lowell, C. A. McClure, of McClure & Spahr of Pittsburg, G. P. Stevens, of McKim, Mead & White of New York, H. J. Dunham and others to be announced later.

Professor William T. Sedgwick left the latter part of March for a six months' trip in the countries surrounding the Mediterranean. Before leaving Boston, he was named by President Maclaurin as a delegate from the Institute to the formal opening of the great technical school at Budapest this summer, at which the Emperor Francis Joseph is to be present.

During Dr. Sedgwick's absence in Europe Professor S. C. Prescott will be the acting head of the Department of Biology.

Professor D. C. Jackson, who was engaged by legislative authority to study and report on the rates and service of the New England Telephone and Telegraph Company in the metropolitan and suburban districts, has recommended to the Massachusetts Highway Commission a revision of rates in almost every class of service.

A Handsome Technology Publication

The *Architectural Record*, published quarterly by the students in the Department of Architecture, has just appeared, and is a highly creditable number. The leading article deals with the construction of chemical laboratories. The present number contains thirteen full-page illustrations, showing the work of the graduates of the department and some of the prize designs in the various competitions. The next number will deal specially with the corrosion of steel in reinforced concrete.

TECH MEN IN THE PUBLIC EYE

NATHANIEL G. HERRESHOFF, 1866-69, was a member of the third class entering the Institute. After leaving Technology, he entered the employ of George H. Corliss, the famous engine builder of Providence. This connection proved a very valuable experience for Mr. Herreshoff. In 1878 he went into partnership with his brother, John B. Herreshoff, who had already established works for building yachts and other craft. Since that time he has been the manager, designer and scientific expert for the company.

Mr. Herreshoff has the distinction of being a leader in the designing of sailing and steam yachts and other fast vessels. The following list gives the names of some of the yachts and other vessels designed by him:—

Sailing: "Fanchon," 1865; "Shadow," 1871; "Amaryllis," 1876; "Gleam," 1877; "Gloriana," 1891; "Dilemma," 1891; "Wenonah," 1892; "Vigilant," 1893; "Dakota," 1894; "Defender," 1895; "Cock Robin," 1896; "Columbia," 1899; "Constitution," 1901; "Reliance," 1903.

Steam: "Anemone," 1870; "Lightning," 1876; "Stiletto," 1885; "Henrietta," 1886; "Now Then," 1887; "Ballymena," 1888; "Cushing," 1890; "Vamoose," 1891; "Porter," 1896; "Morris," 1897.

The "Fanchon," which appears first in the list of sailing vessels, was the second design made by him. The "Amaryllis" was the first catamaran, and the "Dilemma" was the first fin keel. The "Gloriana" was the prototype of the modern yacht with long overhang. The most famous yachts are the cup-defenders "Vigilant," "Defender," "Columbia," "Constitution" and "Reliance." Of the steamers, the "Stiletto," a wooden yacht, was bought for the Navy Department, and made into a torpedo boat. The "Cushing," "Porter" and "Morris" are torpedo boats.

Mr. Herreshoff was the leader in the use of the water-tube boiler for high-pressure steam in the development of compound

and multiple expansion engines running at very high speed. Mr. Herreshoff has two sons at the Institute in the classes of 1911 and 1912.

PHILIP STOCKTON ('99), has recently been chosen president of the Old Colony Trust Company of Boston, which has been merged with the City Trust Company, of which Mr. Stockton was formerly president. The Old Colony Trust Company is now not only the largest trust company in New England, but one of the largest and strongest in the country. Its capital and surplus will be in excess of thirteen million dollars.

Mr. Stockton was graduated from Harvard with the class of '96, and afterwards received his degree at the Institute with the Class of '99. He first entered the service of the Merrimac Manufacturing Company at Huntsville, Ala., as civil engineer. In 1901 he was made treasurer of the Lowell Bleacheries, and since 1902 he has been president of the City Trust Company. He is a trustee in the Provident Institution for Savings, director in the Beacon Trust Company, Cambridge Trust Company, National Bank of Commerce, Winsor Trust Company (New York), Fall River Gas Works, Boston & Worcester Electric Companies and the Minneapolis General Electric Company.

CHARLES R. RICHARDS ('85), was made president of the National Society for the Promotion of Industrial Education at its last meeting. Professor Richards, who is director of Cooper Union, New York city, was one of the most active of those interested in the formation of the society, and was its first secretary. His experience, study and attainments lie strongly in this direction, and the selection of Professor Richards as president of the society will undoubtedly result in its substantial advancement along practical lines.

GEORGE E. HALE ('90), has been elected an honorary fellow of the Physical Society, London, together with Professor S. Arrhenius and Madame Curie.

HENRY M. HOWE ('71), professor of metallurgy in Columbia University, New York, has won great distinction in his special line. He is the only living son of Mrs. Julia Ward Howe, and was born in 1848. He is as well known in Europe as in America.

He has received the Bessemer gold medal, the *cordon bleu* of metallurgists and many other important medals and awards. He is a chevalier of the Legion d'Honneur and a knight of the Russian order of St. Stanislas. He is an honorary member of the Russian Imperial Technical Society, a distinction which he shares with only one of his countrymen, Mr. Edison; of the Société d'Encouragement pour l'Industrie Nationale of France which has thus honored only one other living American, Elihu Thomson; of the British Institution of Mining and Metallurgy; and of the Royal Swedish Academy of Sciences.

GEORGE A. ABBOTT, Ph.D. ('08), who was formerly assistant professor of organic and industrial chemistry at the North Dakota Agricultural College, has just been elected to the professorship of chemistry in the University of North Dakota, and will be in charge of the department. The work in chemistry has recently been separated from the college of mining engineering, and Dr. Abbott has full opportunity for independent work.

GEORGE A. RICKER ('82-'85), was elected president of the Buffalo Civil Service Commission at a meeting held recently. An editorial in the Buffalo *Courier* congratulates the city on securing Mr. Ricker for this position because of his record some years ago as civil service commissioner, when he resigned office rather than accede to a demand from the politicians that certain offices should be made political spoils. Mr. Ricker has a large practice as consulting engineer, and is president of the Buffalo Testing Laboratory.

ARNOLD W. BRUNER ('77-'79), has been appointed one of three experts to study the general question of the development and beautification of the city of Rochester, N.Y., by the Chamber of Commerce of that city. Mr. Bruner was born in 1857, and took a special course in architecture at the Institute. He is widely known as a successful specialist in improvement of municipalities. He has been a member of the commission for the erection of public and municipal buildings in Cleveland, appointed by the government of Ohio, and the post-office, custom-house and court-house of that city were erected in accordance with his plans. He was one of the founders of the Architectural League, and served as its president in 1903 and 1904.

W. N. BANNARD ('66-'69), has just been selected by the directors of the Pennsylvania Road to be one of the three officials delegated to co-operate with the general manager of the road in exhaustive investigations to be made into various important transportation problems. Mr. Bannard has been connected with railroads since he left the Institute in 1869, when he entered the service of the Pennsylvania.

HERBERT JAKUES ('75-'77), has been re-elected president of the United States Golf Association for another year.

JAMES P. MUNROE ('82), who has been identified with the Boston-1915 movement from its inception and a member of the board of directors, has been made executive director. In this position he will act as the responsible head of the entire movement, and for the immediate present will direct his efforts to co-ordinating the various civic, educational, charitable and other activities within the Metropolitan District.

In a recent address Mr. Munroe pointed out that no less important than the great questions of commerce, industry and transportation are those with which Boston-1915 as a co-operating force must specially deal,—questions of overcrowding, of better housing, of a general education meeting modern needs, of vocational direction for boys and girls, of utilizing school buildings to their fullest capacity, properly using the present parks and playgrounds and of getting more, of hastening court proceedings, of bringing great health problems before the people, of preventing unnecessary disease and physical defect, of promoting better understanding between employer and employee, of bringing good music and pictures within reach of all; in short, of making it possible for every willing worker earning an average wage to live healthfully and comfortably, bringing up his children in good surroundings, educating them to be good citizens and making due provision for old age.

GEORGE F. SEVER (1884-87), is mentioned in a series of articles on prominent engineers in the *Electrical World*. Mr. Sever was at the Institute with the Class of '87, and after fifteen years of commercial experience, during the greater part of which time he was connected with the Thomson-Houston Electric Company, he became instructor in the electrical engineering department

of Columbia University. In 1900 he became adjunct professor of electrical engineering, and in 1905 was made professor of electrical engineering, which position he now holds. For two years he filled the office of Dean of the Faculty of Applied Science. In 1905 he was awarded the honorary degree of Master of Science by Columbia. Professor Sever has occupied the position of consulting electrical engineer to the Department of Water Supply, Gas and Electricity of the City of New York since 1902, and was a member of the Municipal Lighting Commission, appointed by Mayor McClellan to draw plans for a municipal lighting system for Greater New York. Professor Sever's connections with the municipality in an engineering capacity have been many and intimate, and these have been in addition to his consulting practice and his work at the university. He is the author of a number of books connected with the subject of electrical engineering.

GEORGE V. WENDELL ('92), professor of physics in charge of the department at Stevens Institute of Technology, Hoboken, N.J., has recently accepted a call to a professorship of physics at Columbia, where he will give the experimental lectures in general physics and have the oversight of the laboratory of physics for the engineering students. He will be assigned to the Faculty of Applied Science. Professor Wendell will begin his duties at Columbia in the fall.

HENRY F. BRYANT ('87), was recently chosen president of the Boston Society of Civil Engineers. The coming year is likely to be of great importance to the society because of the proposal to build an engineering building, in which the society has taken the initiative.

A. LAWRENCE ROTCH ('84), founded the Blue Hill Meteorological Observatory, near Boston, the year after he was graduated. The observatory has, therefore, just completed twenty-five years of work. The initial investigations in the upper air that have been conducted by the observatory in the interest of pure science are proving to be of great practical value to aeronauts and aviators. A short history of the institution and some of the results it has accomplished is given in the '84 class news, and our readers will find it of great interest. Mr. Rotch has been

professor of meteorology at Harvard since 1906. He is Chevalier of the Legion of Honor, and he has received the Prussian orders of the Crown and of the Red Eagle in recognition of his efforts to advance our knowledge of the atmosphere. He is a member of various learned astronomical societies, and has taken part in scientific expeditions through the United States, South America, Europe and Africa. He is the author of "Sounding the Ocean of Air" and "The Conquest of the Air."

A. A. POTTER ('03), who has been assistant professor of mechanical engineering at the Kansas State Agricultural College, has been made professor of steam and gas engineering in charge of the mechanical engineering course.

The Queen of the Cannibal Isles

As every Tech Show must necessarily be better than its predecessor, "The Queen of the Cannibal Isles" is said to be superior in book, libretto, and acting to the entertainment of last year.

There will be four performances of the Show, as follows: *matinée*, Shubert Theatre, Boston, April 15; Northampton, April 16; *matinée*, Shubert Theatre, Boston, April 18; Malden, April 20.

It is more difficult for an outsider to procure tickets for the Show than it is to get tickets to the Harvard-Yale football game. The houses at the city performances are always crowded. Because of the little time afforded for this purpose, only two Boston entertainments can be given.

The Tech Show is a liberal business education in itself to those who are interested in the management. It involves this year a business of about \$12,000. Another interesting fact is that the management aims to choose men for the principal parts who are well up in their studies, because, if they should be barred from the Show at the last minute on account of low standing, the result would be disastrous.

NECROLOGY

PROFESSOR JOHN RAYNER EDMANDS, '69, died suddenly at Johns Hopkins Hospital, Baltimore, March 28, from a stroke of apoplexy. Professor Edmands devoted a great part of his life to coast and mountain surveying, having been connected with the United States Geodetic Survey for many years. He was librarian of Harvard College Observatory from 1883 to the time of his death. He gave largely of his time and means in his efforts to have the White Mountain territory converted into a national park, and was a charter member of the Appalachian Mountain Club of Boston.

GEORGE L. VOSE, Professor of Civil Engineering at the Institute from 1882-86, died March 30, of heart trouble, at his home in Brunswick, Me.

Professor Vose was born at Augusta, Me., in 1831, and, after receiving a high-school education, he spent a year at the Lawrence Scientific School at Cambridge. He immediately went into railroad work, and was employed in various capacities by a number of railroads, both in the east and in the west.

From 1860 to 1864 he was associate editor of *The American Railway Times*, and after that until 1872, when he was appointed professor of civil engineering at Bowdoin College, he did consulting work, principally in Maine and New Hampshire.

Professor Vose was a prolific writer on railroad and engineering subjects, and was the author of several books, some of which were for many years the standard works in these subjects. His best-known book is a manual for railroad engineers and engineer students. He leaves one son, Richard H. Vose, of Mexico.

JOSEPH S. NEAVE, 1882-86, died of appendicitis in Cincinnati, March 16. After leaving the Institute, Mr. Neave became prominently identified with the iron firm of J. P. Walton & Co. of Cin-

cinnati, and was also interested in the Bullock Electric Company, of which he was vice-president and general manager for many years, continuing as director after the Bullock Company was absorbed by the Allis-Chalmers Company.

During recent years he gave much of his life to public service. He was known in business circles as a man of great executive ability, and because of this and his public spirit he was appointed superintendent of the street-cleaning department in Cincinnati. He became one of the founders of the Cincinnati Society of Municipal Research, of which he was chairman of the Board of Trustees, and was influential in raising a considerable part of the money that was needed to establish and maintain it.

A brother, Charles Neave ('90), is a patent lawyer in New York. At the Institute Mr. Neave made many warm friends, and his untimely death will cast a gloom over the wide circle of those who knew him here.

Student Senate working for Co-operation

The investigation necessitated by the "point system" and the other projects in which the Institute committee is interested has shown the grave necessity for some form of surveillance over the finances of the various student interests, which has been a problem for the Institute committee to solve.

During the past four months there have been interesting developments along these lines, looking toward some form of co-operation between the activities, with the Institute committee as the representative head. The Institute committee feels that it should have more power than the activities have been willing to accord it, but they now have apparently arrived on somewhat common ground, and it is likely that in the near future the Institute committee will evolve into a student legislature with real power and influence, while at the same time the various activities will be strengthened.

These developments, which are unique in the college world, are of so much potential importance that the REVIEW will treat them fully in the July number.

MEETINGS OF THE ALUMNI COUNCIL

Annual Reports of the Secretary and Committees—893 Associate Members Added to Association—Committees on Congress of Technology and Insurance Engineering Appointed

The third meeting of the Council was held at the University Club on Jan. 17, 1910. Before the meeting, which was called to order at 8.15, an informal supper was served. There were present members and guests as follows:—

Officers of the Association: *President*, Edwin S. Webster, '88; *Secretary-Treasurer*, Walter Humphreys, '97; *Executive Committee*: Howard L. Coburn, '87; W. Spencer Hutchinson, '92; William S. Johnson, '89.

Representatives at large: Edward Cunningham, '91; J. H. Knight, '96; C. R. Cross, '70; A. D. Little, '85; A. W. Rowe, '01.

Class representatives: Class of '68, Robert H. Richards; '73, F. H. Williams; '75, Thomas Hibbard; '79, Frank G. Stantial, representing E. C. Miller; '81, John Duff; '84, H. W. Tyler; '85, I. W. Litchfield; '86, A. G. Robbins; '87, E. G. Thomas; '88, A. T. Bradlee; '90, W. Z. Ripley; '91, Charles Garrison; '93, F. H. Fay; '94, S. C. Prescott; '95, A. D. Fuller; '96, J. A. Rockwell; '99, H. J. Skinner; '00, Ingersoll Bowditch, representing N. J. Neall; '01, R. L. Williams; '04, M. L. Emerson; '05, G. D'W. Marcy.

Local societies and representatives: Technology Club of New York, Francis C. Green, '95; Washington Society of the M. I. T., I. W. Litchfield, '85; North-western Association, M. I. T., I. W. Litchfield, '85; Technology Club of Milwaukee, I. W. Litchfield, '85.

Guests: Dr. A. A. Noyes, Professor Dwight Porter, R. F. Goodwin.

This was the annual meeting, and, after the records of the previous meeting were read and approved, annual reports were read by the secretary-treasurer, the trustees of the Alumni Fund and of the Life Membership Fund, the Walker Memorial Committee, the trustee of the William Barton Rogers Scholarship Fund and the editor of THE TECHNOLOGY REVIEW.

The report of the Advisory Council on Athletics was presented at the fourth meeting of the Council, but is published with the other reports below.

The report of the Committee on the School for the previous year, which had failed to arrive in time to be read at the previous annual meeting, was at this meeting read, accepted, and by earlier vote of the Council the Committee on the School was dissolved, which, as may be noted, is a recommendation made in the report.

A committee previously appointed reported in regard to proposed changes in the constitution, and these were referred to the Executive Committee.

A proposed Congress of Technology, proposed at the previous meeting, was discussed in detail, and it was suggested that it be postponed from the suggested time in May to October or November. Plans for this Congress, with the hearty approval of the Council, are to be presented to the Executive Committee of the Institute.

Professor Porter, chairman of the Faculty and guest of the Council, was introduced by the President, Mr. Webster. Professor Porter spoke of the assistance that the alumni, through its Council, can render the Faculty, and cited instances where groups of the alumni had already assisted the Faculty in its solution of problems. The Faculty is glad to realize that there is a truly representative body of the alumni that can be readily consulted. Professor Porter spoke of the desirability of establishing laboratories of research in hydraulics. This is in line with the work of the committee appointed to consider the establishment of a laboratory in Engineering Research.

Mr. Green, representative of the Technology Club of New York city, spoke of their new club-house, and wished the alumni in Boston to appreciate how welcome they will be when they come to New York.

The Council adjourned at 10.15 P.M.

(Signed) WALTER HUMPHREYS,
Secretary-Treasurer.

ANNUAL REPORTS

I.

SECRETARY-TREASURER

The past year notes the beginning of the new form of government of the Alumni Association of the Massachusetts Institute of Technology. Its new constitution, as accepted by a practically unanimous ballot during the past year, took effect when the new officers took their places immediately after the banquet, which was held last year on January 14 in Horticultural Hall.

To end the new year, the last administration celebrated the election of the new President of the Institute, Dr. Richard Cockburn Maclaurin, at the annual banquet. An account of this is published in THE TECHNOLOGY REVIEW, which had by the last administration been adopted as the official organ of the Association, another event in the past year of the Association.

In the reorganization of the Association there was formed the Alumni Council, which met for its first meeting last spring, and which has since been reported in full in the REVIEW. It has held since then another meeting, and tonight is its third meeting. For this Council the Executive Committee of the Association also acts as the Executive Committee of the Council.

The Corporation of the Institute has shown its favor toward the Council, and it has presented concrete examples of the way in which the Council can assist the government of the Institute by its advice and by the work of committees appointed on the suggestion of the Corporation. As an example of this, during the past year the Executive Committee of the Institute has asked the alumni, through its Council, to assist at the inauguration of its new President; and, for the alumni, President Webster, Mr. Little and the Secretary co-operated with representatives from the Corporation and from the Faculty of the Institute. The Secretary chosen was secretary of this committee.

Since that time and by invitation of the Acting-President of the Institute, committees have been appointed as noted in the records of the first meeting of the Council. One committee that was appointed to consider the advisability of establishing a summer camp for the school in surveying has reported and had its report accepted. That report has been presented to the Executive Committee of the Corporation. The several other committees have made reports of progress.

The Executive Committee of the Council and of the Association has held during the past year seventeen meetings, and has elected during

the year 893 associate members, and 59 have become life members. By graduation in June 215 were added to the list of members, making a total of 5,236.

The work of the alumni office has continued, and as many as thirteen assistants have worked in the office at one time. The largest single piece of work outside the regular duties was the compilation, in co-operation with the Publication Committee of the Faculty, of the Register of Former Students. The Executive Committee voted toward that, besides the clerical assistance, money enough to amount with this to \$1,000, the Association's part in the expenses of this publication.

At the first meeting of the Council a report was made of the appointment of a special committee to take charge of the Reunion. It is enough to read the July number of the REVIEW to convince any one of the success of this past reunion, the second in the history of the Institute.

Your Nominating Committee has reported during the year, and by letter ballot the following officers have been elected for the coming year: President, A. F. Bemis, '93; Vice-President, F. W. Hobbs, '89; Secretary-Treasurer, W. Humphreys, '97; members of the Executive Committee for two years: W. E. Piper, '94; G. W. Swett, '03; the following five representatives at large on the Council for two years: Charles Hayden, '90; Allan W. Rowe, '01; Eben S. Stevens, '68; Stoughton Walker, '87; George V. Wendell, '92; the following have been elected representatives of their classes on the Council for five years: E. W. Rollins, '71; Charles T. Main, '76; John Duff, '81; Arthur A. Noyes, '86; Charles Garrison, '91; J. A. Rockwell, '96; Robert L. Williams, '01; John J. Donovan, '06.

Mr. John L. Batchelder has again been elected a member of the Advisory Council on Athletics.

During the past year the following local societies have been given representation on the Council: M. I. T. Club of Central New York; Technology Club of the Merrimack Valley; Technology Club of New York; North-western Association, M. I. T.; Pittsburg Technology Association; Technology Club of Philadelphia; Washington Society of the M. I. T.; Technology Club of Milwaukee.

Meetings of the Alumni Council

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ALUMNI ASSOCIATION

FINANCIAL REPORT FOR 1909

Balance on hand Dec. 1, 1908 \$1,133.14

Receipts:—

Dues \$2,633.76

Life Membership 1,447.00

REVIEW:—

Bound Volumes 11.30

Subscriptions 2,369.11

Advertising 3,323.70

Cash Sales 11.13

Special Subscriptions 9.80 5,725.04

Dinner Tickets 1,464.00

Spread 21.00

Interest 53.05

Alumni Fund for Register of Former Students, 792.57

Council Meeting, Dinner 60.00

Outside:—

Labor 2,274.01

Supplies 610.32

Other Alumni Organizations for Fees, Dues, 15.50 15,096.25
Dinners, etc.

\$16,229.39

Disbursements:—

Supplies \$234.82

Stationery, Postage, Printing 981.22

Publishing Nominations 36.95

Express and Car-fares 12.70

Telegrams and Telephone 3.18

Travelling Expenses of Delegates 14.30

M. I. T. Register of Former Students, \$1,000,

—\$207.43, amount expended by Alumni

Association for labor, material, etc. 792.57

Council: Meetings, Dinners, Printing 79.04

REVIEW Expenses 6,509.40

Trustees of Life Membership Fund 257.00

Collection Charges, Refunds, Checks returned

unpaid 40.05

Dinner:—

Expenses 2,359.94

Refund 33.00

1910 Dinner 9.50

Clerical Work and Salaries 3,517.20

In connection with outside work 950.90

Amount paid to Other Alumni Organizations 16.50 15,848.27
for Fees, Dues, Dinners, etc.

Balance on hand Jan. 1, 1910 \$381.12

Bills Receivable	\$795.88
On hand	381.12
Total	<u>\$1,177.00</u>
Bills Payable	\$2,814.47
Assets	<u>1,177.00</u>
Deficit	\$1,637.47

WALTER HUMPHREYS,
Secretary-Treasurer.

II.

M. I. T. ALUMNI FUND AND M. I. T. LIFE MEMBERSHIP FUND
REPORT FOR THE YEAR 1909

Amount of Alumni Fund, December, 1908 . . .	\$1,456.32	
Received from Coupons, Tech Club Bonds . . .	40.00	
Interest, Franklin Savings Bank	18.42	\$1,514.74
Less payment upon vote of Executive Committee towards expenses of Register of Former Stu- dents		<u>792.57</u>
		\$722.17
Amount Life Membership Fund, December, 1908, . . .	\$3,435.78	
Received from W. Humphreys, Secretary M. I. T. Alumni Association (59 life members' fees) . .	1,475.00	
Interest, Franklin Savings Bank	45.44	
Interest, Five Cents Savings Bank	90.75	
	<u>\$5,046.97</u>	
Paid to W. Humphreys, Secretary M. I. T. Alumni Association (\$1 for each of 242 life members), . .	242.00	<u>4,804.97</u>
Total Funds held by the Trustees		\$5,527.14

The funds are invested as follows:—

Ten (10) \$100 second mortgage Technology Club 4% Bonds	\$1,000.00
Deposit in Franklin Savings Bank	494.74
Deposit in Franklin Savings Bank	397.30
Deposit in Five Cents Savings Bank	2,402.10
Still in hands of Treasurer M. I. T. Alumni Asso- ciation (as per his communication)	<u>1,233.00</u>
	\$5,527.14

Meetings of the Alumni Council

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Alumni Fund receipts and expenditures since the beginning of the Trust (1880):—

From Treasurer of the Alumni Association . . .	\$1,069.00	
From Interest on Investments	1,329.43	
Bond Premium	40.00	
Cash received in 1898	10.00	\$2,448.43

Payments made on order of Executive Committee of the M. I. T. Alumni Association		1,726.26
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\$722.17

(Signed) JAMES P. MUNROE,
FRANK L. FULLER,
EDWIN C. MILLER,
Trustees.

LIFE MEMBERSHIP

Number of Life Memberships received from Dec. 31, 1908, to Dec. 31, 1909	59	
59 Life Memberships at \$25		\$1,475.00
Total number of Life Members to Dec. 31, 1909 . . .	242	
242 Life Memberships at \$1		242.00

Amount due Life Membership Fund from Alumni Association		\$1,233.00
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III.

WALKER MEMORIAL FUND

JANUARY 1, 1910

Receipts

Subscriptions received by Treasurer of Alumni Committee .	\$83,118.34
Interest	1,097.26
Additional subscriptions by Treasurer of Institute	11,603.34
Interest on fund after investment to Jan. 1, 1910	30,575.73
Total	<u>\$126,394.67</u>

Expenses

Bills paid by Treasurer of Alumni Committee .	\$2,210.77
Bills paid by Treasurer of Institute	1,332.10
Total bills paid	<u>\$3,542.87</u>
Less appropriation of Association	600.00
Total bills paid from fund	\$2,942.87
Balance in hands of Alumni Committee	2,554.83
Balance in hands of Treasurer of Institute	120,896.97
	<u>\$126,394.67</u>

IV.

REPORT OF THE WILLIAM BARTON ROGERS SCHOLARSHIP FUND
COMMITTEE, JAN. 17, 1910

The fund was established to honor the name and memory of President Rogers and to give aid to students needing financial help.

The fund was founded in 1885, and went into operation in the school year 1890-91. It now amounts to \$11,249.59.

The sum available for helping students consists of the annual interest on the fund, to which are added all sums refunded by students. Especial care is taken to see not only that the principal is not drawn upon, but that the fund receives a slight increment of \$50, more or less, by way of insurance. This year through an oversight it has been diminished by \$327.73.

It is a loan fund; that is to say, it loans money to students without interest if the loans are repaid by the student within three years of the date he discontinued his studies. If payment is not made by that date, 6 per cent. interest is charged from that date until it is paid.

The following account is taken from the books of the Institute:

Dr.

Oct. 1, 1908, to balance	\$11,577.32	
One year's interest to Sept. 30, 1909	504.77	
Refunded by former students	722.50	\$12,804.59

Cr.

Sept. 30, 1909. Scholarships awarded:

By E. Q. Adams	\$90.00
H. F. Ballard	100.00
C. L. Batchelder	50.00
A. K. Comins	100.00
F. R. Faulkner	50.00
K. C. Gaynor	100.00
C. W. Gram	100.00
M. D. Hersey	100.00
H. H. Howland	100.00
R. L. Jones	50.00
F. S. Lovewell	150.00
M. A. Lyons	65.00
H. Schaffer	100.00
J. H. Schakne	50.00
C. H. Sutherland	150.00
J. G. Tripp	150.00
J. T. Whitney	50.00
	<hr/>
	\$1,555.00
Balance on hand	11,249.59

\$12,804.59

The total sums paid to students during the nineteen years the fund has been in operation are given in the following table, together with the amounts that have been paid back on each year's account:—

Year	Number of Students Aided	Amounts Awarded	Amounts Paid back	Balance Due	<i>Amounts which could have been awarded if prompt payments had been made, calling annual inter- est \$400 and 3 years needed to pay</i>
1890-91	2	\$150.00	\$150.00		
1891-92	8	325.00	250.00	\$75.00	\$400.00
1892-93	7	450.00	325.00	125.00	400.00
1893-94	6	375.00	200.00	175.00	400.00
1894-95	4	450.00	325.00	125.00	800.00
1895-96	5	450.00	175.00	275.00	800.00
1896-97	6	400.00	50.00	350.00	800.00
1897-98	5	500.00	110.00	390.00	1,200.00
1898-99	21	1,087.50	387.50	700.00	1,200.00
1899-1900	5	525.00	175.00	350.00	1,200.00
1900-01	7	512.50	287.50	225.00	1,600.00
1901-02	7	600.00	200.00	400.00	1,600.00
1902-03	6	525.00	275.00	250.00	1,600.00
1903-04	5	500.00	200.00	300.00	2,000.00
1904-05	5	425.00	200.00	225.00	2,000.00
1905-06	9	625.00	50.00	575.00	2,000.00
1906-07	8	625.00	125.00	500.00	2,400.00
1907-08	9	925.00	275.00	650.00	2,400.00
1908-09	17	1,555.00	—	1,555.00	2,400.00
142		\$11,005.00	\$3,760.00	\$7,245.00	\$25,200.00

It is gratifying to see that the beneficiaries have come forward this year and paid back a larger sum than ever before; namely, \$722.50. If they will keep up this pace, and clear off all this indebtedness, the students at present attending the school will come in for a larger share of the money that belongs to them than they have in the immediate past, owing to the tardy payment of dues by former beneficiaries.

(Signed) ROBERT H. RICHARDS.

V.

ADVISORY COUNCIL ON ATHLETICS

JANUARY, 1910.

The Advisory Council on Athletics begs to submit a tentative report at this time.

Covering the season of 1908 and 1909, the Massachusetts Institute of Technology was represented by a Track Team, which took second place at the annual meeting of the N. E. I. A. A. It also had a satisfactory representation in the N. E. I. C. Lawn Tennis Association, the

N. E. I. Golf Association, and was further represented by a Basket Ball and Hockey Team. It was represented by a Fencing Team at the Annual Meeting of the Intercollegiate Fencing Association, at the Annual Track and Field Meet of the Intercollegiate Association of Amateur Athletics of America at Cambridge, and also in the Cross Country Run of the same association, and in the Cross Country Run in the fall of 1908 finished second.

Your Council begs to state that it has followed the same general procedure as noted in previous years in conduct of outdoor athletic sports at the Institute, and there has been much more interest manifested by the students and more men have taken part, not only in all athletic contests, but in general practice on the field and in the gymnasium.

Field Day, 1908, was won by the Class of 1912, this being the second time in the history of Field Day that the entering class were winners.

The Tech Show of 1909 turned over to the Advisory Council \$450.

A scheme of Season Tickets was inaugurated last spring by undergraduates, and it was expected that the alumni would take this method of aiding athletics.

The price of the tickets was \$3 each, granting admission to all Basket Ball Games, all Inter-class Meets, Field Day and any Dual Meet held at Technology Field, as well as giving season ticket holders preference to obtain seats in the Technology section at the B. A. A. Games.

Notices were sent to the 2,083 alumni and past members of the Institute within a narrow radius of Boston. Thirty-seven tickets were sold through this medium. The cost of notification was \$46, and the receipts from this source was \$111.

The Council begs again to refer to the report in connection with financing, which has been referred to the Committee on Student Welfare. It feels that action must be taken on this matter before the close of the present school year. Your Council feels that it cannot continue under current conditions.

One of the members of the Council has written an article on the general status of M. I. T. Athletics, which will appear in an early number of THE TECHNOLOGY REVIEW; and this we feel should practically be a part of this report, and to which the Alumni Association are respectfully referred.

Yours very truly,

FRANK H. BRIGGS, *Chairman*
JOHN L. BATCHELDER.
J. ARNOLD ROCKWELL.
RALPH S. FRANKLIN.
KARL D. FERNSTROM.
JOHN AVERY, JR.
C. P. ELDERED.

Meetings of the Alumni Council

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REPORT OF TREASURER

JAN. 14, 1909, TO SEPT. 10, 1909

Receipts

Cash on hand Jan. 14, 1909	\$386.76
M. I. T., 1908-09	723.66
Interest	1.17
Profits N. E. I. A. A. Meet	48.70
Dividend N. E. I. A. A.	16.56
M. I. T. A. A. balance	8.91
Tech Show, 1909	450.00

\$1,635.76

Expenditures

Labor, Tech Field	\$321.00
Supplies, Tech Field	418.39
Athletic Teams	669.50
Loans repaid	150.00
Interest	27.50
Miscellaneous	5.00

\$1,591.39

Cash on hand 44.37

Balance \$1,635.76

Outstanding

Unpaid Loans, 1907	\$500.00
Unpaid Loans, 1908	350.00
	<u>\$850.00</u>

Items in Team Account

Athletic Association, including Cross Country, Relay and Track Team	\$614.50
Fencing	50.00
Tennis	5.00

\$669.50

Respectfully submitted,

(Signed) RALPH S. FRANKLIN,
Treasurer.

VI.

THE "TECHNOLOGY REVIEW."

In presenting the annual financial report of THE TECHNOLOGY REVIEW, on behalf of the Board of Publication, I regret that on their face the figures indicate a very decided loss.

In the annual report for Nov. 1, 1908, which was the last one rendered, as the fiscal year then ended November 1, there was a deficit on account of the REVIEW of about \$169. The fiscal year now ends January 1. In the accounts between Nov. 1, 1908, and Jan. 12, 1909, when the REVIEW was turned over to the Alumni Association, the debits and credits about balance. For the year ending Jan. 1, 1910, the figures show a deficit on account of the REVIEW of a little over \$1,500.

In explanation of these large figures of loss I would say that the board voted to send the January, 1909, REVIEW to every former student, in order that we might prepare the way to increase our associate membership.

Of the January, 1909, REVIEW, 9,600 copies were printed, 7,100 of which went to non-members or members in arrears. These magazines, at 20 cents each, which was the pro-rata cost, amounted to \$1,420. It was decided to pursue the same course in regard to the July number, which contained a full account of the Reunion with copious illustrations. The number of extra copies printed over our regular edition was 5,600. These copies cost us at the rate of 25 cents apiece on account of the engravings and other extra expenses. The cost of these extra 5,600 copies was \$1,400. In other words, the extra cost of the REVIEWS which were thus given away during the year amounted to nearly \$3,000. It will be seen that, if this policy had not been adopted, instead of having a deficit, the REVIEW would have had to its credit something under \$1,400.

As a matter of fact, the Association of Class Secretaries generously agreed to reimburse the Association for the extra cost of the January REVIEW. The amount of this cost has not yet been definitely decided, but it will be a substantial figure, and should reduce the deficit to four or five hundred dollars. It is, furthermore, to be remembered that during the year just closed, as a result of a direct campaign on the part of the officers of the Alumni Association and secretaries of classes, together with the best assistance the REVIEW could give, 893 associate members have been added to the Association. This amounts to an increased income of \$893 on account of the REVIEW for the coming year.

It is to be understood that most of these associate members were admitted long before the first of the year, and we felt that it would be a wise policy to send them the REVIEW, even though their dues were

not yet payable. This made a very large expense, as several hundred received the two numbers. The same thing is also true of the non-graduates in the Class of 1909, which numbered 400. These men received two issues of the REVIEW, and, as a result, many of them have joined the Association.

Little by little the number sent to colleges and other educational institutions has grown until this has become a large item. The actual membership in the Association has also grown, for, whereas during the year 1908 9,850 copies of the REVIEW were printed, in 1909 26,700 were printed. This included 12,700 extra copies. The net issue was 14,000. Thanks to increased interest, the activity of the Alumni Association and the efforts of the secretaries of classes, the advertising was largely increased. The advertising for 1908 amounted to \$857, and for 1909 \$3,323. There were 491 pages of reading matter in Volume X., 603 pages in Volume XI.

I. W. LITCHFIELD,
For Committee on Publication.

VII.

REPORT OF THE ALUMNI COMMITTEE ON THE SCHOOL, 1908-09

The year 1908 has been one of progression at the Institute. A new President has been elected, and it is expected that he will take possession of the office about the middle of the coming year. Professor Richard C. Maclaurin, the new President, comes to the Institute with a very high reputation for scholarship and as a leader of men. There is no doubt but that he will receive the loyal support of the Corporation, Faculty and Alumni.

During the year the membership of the Faculty has been increased by the promotion to the grade of Assistant Professor of eight members of the Institute staff, thus making it a body of ninety-two members.

The number of registered students is fourteen hundred and sixty-one (1,461), an increase of fifty-one (51) over the number attending at the same time last year.

The question has been again raised as to whether it would not be best to place a limitation upon the number of students. The Acting-President in his report states as follows: "My own opinion is that it should be the permanent policy of the Institute to receive and provide for all capable and well-prepared students who desire to avail themselves of the opportunity it offers, for only in this way can it attain its full measure of usefulness." With this opinion your committee fully concur.

The general affairs at the Institute have been reported upon very fully and published in the President's report and in the different bulletins

issued by the Institute. In view of this fact and also of the wide publicity given the affairs of the Institute in the REVIEW and other publications, it has been thought best by the committee not to make at this time a general report of the affairs in the different departments.

Two years ago your committee expressed the opinion that, due to the alumni representation on the Corporation and to other causes, it might be wise to abolish the Committee on the School. At that time it was thought best not to press this subject, as the committee furnished a means of communication between the alumni and the school. At the present time the conditions are entirely different. A council has been elected whose duties, it would appear, might conflict with those of the committee. Hence it is suggested by your committee that the By-laws be so amended that the committee may be abolished and its duties turned over to the Council, where they can be more efficiently conducted.

(Signed) JOSEPH P. GRAY.

FOURTH MEETING OF THE ALUMNI COUNCIL, MONDAY, MARCH 21, 1910, AT 8.15 P.M., AT THE UNIVERSITY CLUB, BOSTON.

After an informal supper the Council was called to order by President Bemis.

The following members were present, with Messrs. Gorham Dana, '92, and Henry Howard, '89, as guests: *President*, A. F. Bemis, '93; *Vice-President*, Franklin W. Hobbs, '89; *Secretary-Treasurer*, Walter Humphreys, '97; *Executive Committee*, Walter E. Piper, '94.

Five latest living ex-Presidents: Walter B. Snow, '82; Everett Morss, '85; Frank L. Locke, '86; Edwin S. Webster, '88.

Representatives at Large: Charles T. Main, '76; J. P. Tolman, '68; A. D. Little, '85; A. W. Rowe, '01.

Class Representatives: '73, F. H. Williams; '74, George H. Barrus; '81, John Duff; '83, Harvey S. Chase; '84, Harry W. Tyler; '85, I. W. Litchfield; '86, A. A. Noyes; '87, E. G. Thomas; '88, Arthur T. Bradlee; '89, Jasper Whiting; '93, Frederic H. Fay; '95, Andrew D. Fuller; '98, C.-E. A. Winslow; '99, H. J. Skinner; '00, P. R. Ziegler (representing N. J. Neall); '03, F. A. Olmsted; '05, G. DeW. Marcy.

Local Societies and Representatives: North-western Association, M. I. T., I. W. Litchfield, '85; Washington Society of the M. I. T., I. W. Litchfield, '85; Technology Club of Milwaukee, I. W. Litchfield, '85.

At the usual reading of the records of the previous meeting the secretary reported the proceedings of the executive committee of the Association since the last meeting of the Council, and announced the election of Edward Cunningham, '91, Frank W. Rollins, '81, and Edwin S. Webster, '88, to the Corporation of the Institute as alumni term members. The executive committee proposed a new section of the constitution which will provide for an auditing committee. By vote of the Council this was indorsed.

Of the several committees that exist by vote of the Council and appointment of the president, that on aeronautics made a report of progress, outlining a scheme for a laboratory where research in aeronautics can be carried on. The committee

reported also that there seemed to be available an appropriate lecturer on aeronautics. The committee suggested, instead of there being a regular course in aeronautics, that it be placed in the Institute curriculum as graduate work, following the completion of the course in mechanical engineering.

The Committee on Student Welfare also reported that in response to the notices which had been sent to the alumni, with the announcement of the annual banquet, eight alumni have offered to assist needy students, and since then a number of students of the third and fourth years have been assisted, and have by this means been able to continue their work at the Institute instead of dropping out.

Mr. Tolman, who happens also to be a member of the visiting committee of the Corporation, announced that for several years the department of mechanical engineering has desired to provide for work in refrigerating engineering, and that there now seems to be a chance of receiving some apparatus for such work.

A report of progress was made by the Committee on the Foundation of Scholarships, and it was announced that committees in several localities were working toward the establishment of scholarships for young men in these districts.

When the question of whether or not these committees, appointed for the consideration of various subjects should consider the financial side, it was suggested by a member of the Council that he believed that greater interest can be maintained in the Institute by asking people now even for small contributions, and that upon their viewing the satisfactory disbursement of these smaller amounts the donors will be all the more interested to give larger amounts, if needed.

In connection with the suggestion made by President Maclaurin in his report, by letter, of his recent trip through the West among the local Technology associations, it was voted that we arrange, with local or branch associations in locations where it seems possible or desirable to get the local newspapers to publish Technology news, some method of getting prompt newspaper insertions of such items of general interest as the publicity agent of the Institute may be able from time to time to send out.

It was also voted by the Council that Mr. Litchfield, as editor of the REVIEW, send out special news letters or REVIEW supplements about every month to such members of local associations as will best tend to foster and maintain an active interest by such local associations in the general Association's work.

At this time it was also voted that there should be appointed by the president a Music Committee of three to have charge of the orchestral scores of the Association; to arrange for any song fest; to assist in arranging trips for the undergraduate musical clubs among the local associations; and also to concern itself with the plans for the Pop Concert.

A letter from Mr. Gorham Dana, manager of the Underwriters' Bureau of New England, was presented in regard to the establishment of a course in fire insurance engineering at the Institute, and it was voted that a committee of three be appointed by the president to consider this question.

Owing to the lateness of the hour, it was agreed that the discussion of the question of raising subscriptions for another period by the alumni and what part the Alumni Association would take in regard to raising funds for the new site should be postponed until another meeting.

The chairman of the Committee on the Proposed Congress of Technology,

in a report of progress, told the Council that a large number of desirable speakers had been considered, and it was believed possible to arrange a satisfactory list of papers to be presented, and that plans are being considered for this Congress, which it is now proposed not to hold until the fall of this year, when the laboratories of the Institute will be open.

The question of a future publication of the Register of Former Students was raised, and it was the opinion of the Council that the publication of a revised edition of the Register of Former Students this coming year is for the best interests of the Institute.

The Council adjourned at 10.35.

WALTER HUMPHREYS

Secretary-Treasurer.

Statistics from the Women's Association

The report of Mrs. William C. Ewing, chairman of the registration committee of the Technology Women's Association, recently presented, shows that the number of women who have been graduated from Technology is 91. 35 of these are married, 5 are dead, 27 of them are teachers and 12 are architects. Teachers are located at Greensboro College, North Carolina; University of Illinois, University of Chicago; Wilson College, Pennsylvania; Maryland Women's College; Barnard College, New York; Wellesley College; Simmons College; Burnham School, Northampton, Mass.; Quincy Mansion School, Wheaton Seminary and in the high schools of Boston, New York, Chicago, Worcester, etc., as well as at Technology.

There have been 668 special students, many of whom were at the Institute one year only. A large number of these entered the biological course. This was especially true before Simmons College was established, a marked decrease having taken place since that time. The largest number of women students registered in one year was in 1895 and 1896, when there were seventy-five. It has diminished until the present year, when there are only 8.

The registration committee would like information in regard to the following persons: Alla F. Young, '94; Alla H. Warren, '95; Alda H. Wilson, '99; Alma E. Anmach, '87; Aimee C. Ferson, '98; Barbour Bruce, '03.

TECHNIQUE, 1911

Soon after the REVIEW is in the hands of its readers, a new volume of *Technique* will be ready. The preparation of this volume is kept entirely secret, but it is understood that the present effort is fully up to the standard.

It will be issued to the public on the day of the *Technique* rush, April 14, when one hundred or more of the students, dressed in football costume or otherwise, will strive manfully to secure the first volume, which is handed out to the successful contestant through a small door in a barricade just above the seething mass of humanity.

Twenty-five volumes, signed by the President, are given out in this way. These volumes are numbered,—the first five of which are free. For the first time in many years the book promises to be on a paying basis. The business management of the present number is entitled to much credit for this result.

Statistics of Attendance at Scientific Schools

A recent number of *Science* gives registration statistics for twenty-eight universities and nineteen colleges and scientific schools. The universities reporting as many as one thousand students in their scientific schools and architectural departments for 1909-10 are:—

Cornell	1,867
Illinois	1,327
Michigan	1,291

Pennsylvania falls just below the line with 998, while Purdue, which has 1,682, is classed with the colleges.

A general depression is noted in the cases of the university engineering schools, Stanford being the only institution to show a considerable gain, and all but five of the others sustaining a loss. Lehigh gains five, Purdue loses thirty-five, the Institute gains eighteen.

NEW ASSOCIATE MEMBERS

The following former students were elected associate members of the Alumni Association on the dates indicated:—

Jan. 6, 1910: Seymour F. Barnett, '09; Herbert H. Bennett, '09; Wallace E. Boardman, '09; John N. Boyce, '09; Fletcher H. Burke, '05; Frank A. Casey, '09; Warren L. DuBois, '09; William C. Ferguson, '09; Breed Hall, '07; Frederick S. Hitchcock, '97; George E. Hodsdon, '09; Eugene A. Hunt, '09; William F. Jones, '09; George S. Keyes, '92; Frank J. Lange, '09; George A. Morrison, '09; and Victor E. Siebert, '09.

Jan. 31, 1910: Merton Belcher, '09; Ralph E. Beck, '08; Charles O. Churchill, '90; George A. Clatur, '08; Marion H. Foss, '09; Ronan C. Grady, '05; Abram H. Ginzberg, '09; William T. Johnson, Jr., '07; Allen C. Jones, '95; Donald MacRae, '85; Shirley A. Mace, '09; Frank H. Remick, '09; W. Pearce Rayner, '07; Harold Smithwick, '99; James A. Stetson, '99; William A. Stocking, '08; William F. Turnbull, '07; Fred William Tupper, Jr., '08; Harold E. Weeks, '08; George S. Witmer, '09; and Edwin C. Woodward, '77.

March 8, 1910: William Channing Brown, '91; Robert M. Keeney, '09; Mark E. Kelley, '09; Orrin Sanborn Lyon, '08; Henry Usher Miller, '09; Fred Moore, '09; Louis B. Rapp, '03; Thomas A. Tillard, '09; Carl J. Trauerman, '07; and Ray van Eetvelde, '09.

March 21, 1910: John H. Caton, 3d, '08; Elias S. Hanna, '09; George S. Hewins, '96; Sherman Lougee, '09; Lincoln R. Soule, '09.

An Erroneous Report

It has been generally reported in the newspapers that Commodore Hovgaard, who recently died in Copenhagen, was Professor Hovgaard, of the Institute of Technology. Commodore Andrias Hovgaard, who died in Denmark, is a brother of Captain William Hovgaard of the Royal Danish Navy, now professor of naval design at the Institute of Technology. Professor Hovgaard's special work is with the graduates of the United States Naval Academy, who are sent by the department to the Institute for a graduate course in naval engineering. Like his brother, Professor Hovgaard has been an arctic explorer, and it is quite natural that their names became confused.

MISCELLANEOUS CLIPPINGS

The applications of science are multiplying and are being carried forward into new fields, and the field of activity of a school of applied science should be correspondingly extended, which will make it necessary to cultivate a wider area and cultivate it more intensely than in the past. President Maclaurin is convinced that this means co-operation with other educational institutions, in order that each of them may work most effectively and duplication of effort may be reduced to a minimum. But it will not surprise those who have studied this subject that he does not suggest any solution of it. It has been discussed in Boston before and in many other places, but up to the present time nobody has discovered any method of accomplishing the desired results. The opinion has been expressed a number of times recently, however, that possibly a partial solution is to place the general supervision of instruction in the same subject in several neighboring schools under a single head and to share the expense of some of the leading assistants in the various departments between them. The claim made for this plan is that several schools, by co-operating, can engage men of the highest standing as heads of departments and also secure the assistance of high-grade men as their assistants, thus saving enough money in each school to permit material increases in the salaries of those carrying the burden of the class-room instruction. Whether or not the plan is practicable is a conundrum that must be left to those more familiar with the details of college administration. The fact that it is receiving sober consideration is an indication of the importance of the subject.—*Engineering Record*.

President Lowell spoke a timely truth when he told the Technology alumni that all educational institutions, though rivals in a sense, are on the same side, working for the benefit of humanity all over the country. In furtherance of this benefit the specific plea of Technology for funds with which to equip itself by acquiring an adequate site is pertinent. Technology has suffered from lack of funds, and still so suffers. No educational institution deserves more liberal support. It is astonishing that the aid does not come more easily.—*Boston Advertiser*.

The three-thousand-mile trip by President Maclaurin of Technology through the west will serve the double purpose of making the technical educators and others of that part of the country better acquainted with

the Institute's head and drawing increased attention to the Institute itself. If this stimulated interest serves to attract needed funds to this institution, an excellent object will be accomplished. A number of generous donations to the Institute would be appropriate and welcomed. For so exceptionally efficient an institution to need money, as this does, is a sad commentary on the generosity of men who have prospered in the technical field.—*Boston Advertiser*.

The Massachusetts Institute of Technology will be a welcome addition to the rowing circles; and, while it may take a few seasons to develop the strength of a representative 'varsity crew, the cardinal and gray should be a conspicuous figure on the Charles River Basin, both in class races and open regattas. I remember when M. I. T. had a 'varsity football team in the days of Tommy Curtis, John Manahan, Cushing and the two Thomases, and, with Princeton taking an active interest in rowing on Carnegie Lake and "Tech" entering into the spirit with a vim, there is no telling what we may expect in collegiate rowing circles in the near future. M. I. T. has always been noted for her spirit in whatever she undertakes.—*Boston Journal*.

The use of experimental models in the designing of ships has become very common of late, and all large shipbuilding concerns have tanks where these models are used. It is now proposed to make these models larger, so that they may actually be navigated, making it possible for designers to take into account other features besides the lines of the hull. It is announced by Professor C. H. Peabody that the Department of Naval Architecture of the Massachusetts Institute of Technology is about to undertake important investigations by aid of such a navigable model about forty feet long. Says *International Marine Engineering* (New York, February):—

"This method of research has already been used in Great Britain in connection with the designs of the 'Lusitania,' 'Mauretania' and 'Otaki,' where the proposed designs were carried out on a small, inexpensive scale, and tested under approximately the actual conditions of service. The immediate problem which has been chosen for investigation at the Institute is the obscure one of the added resistance due to the action of the propeller working in the wake of the vessel.

"In order to take advantage of a successful series of progressive speed trials which were made several years ago by Professor Peabody, the experimental boat will be a one-fifth scale model of the United States steamship 'Manning.' Having at hand the data obtained in the former progressive speed trials of this vessel, the results obtained with the model will furnish a certain basis for determining from model experiments what may be expected of full-size ships. The propulsive machinery of the

model will consist of a gasoline electric generating set and a motor geared to the propeller shaft. This combination is convenient for experimental work, since the conditions can be controlled over a wide range and the measurements of power be easily made.

"This method of research opens up a wide field of possibilities, and leads us to expect that many of the abstract problems in connection with resistance and propulsion which have hitherto been obscure, as well as many of the concrete problems arising in the design of new vessels, will by this means meet with a ready solution."—*Literary Digest*.

Dr. Richard Maclaurin, the newly elected President of Massachusetts Institute of Technology, was the guest of honor at a dinner at the Kansas City Club last evening, given by the local alumni of that institution. *Professor Richardson acted as toastmaster, and, when coffee and cigars had been reached, introduced the guest and principal speaker of the evening.

"It is our privilege to have with us tonight," said the toastmaster, "a representative—and the leading representative—of the leading technical institute in the world. Most of us are familiar with the early struggles of the school and the heroic efforts on the part of the early professors to keep the school together and build up such an institution as it is today. It is a fact that these teachers went for months and months without compensation. Such a school must have been built on a good foundation,—real cement. This is the first time in my life, as a 'Tech' boy, I can say with impunity what I please about a President. Professor Maclaurin will tell us tonight a great deal about 'Tech' that those of us who have been out a long time do not know."

Dr. Maclaurin prefaced his remarks with the statement that it would spoil the pleasure of a delightful informal gathering for him to deliver a formal speech, and he begged permission to talk wholly informally about the "good old M. I. T." The speaker said it was his first visit to Kansas City, and he was pleased to find so many "Tech" graduates here. It did not require any extraordinary foresight, however, to see in Kansas City a city destined to rank among the great municipalities of the country, and the wonder was that more "Tech" graduates had not made their homes here.

Speaking of the early days of the Institute, founded in a peculiarly unfortunate time, in '61, right at the breaking out of the great Civil War, when people had other things to think of than education and science, "Its early struggles may explain its extraordinary success," said the speaker,—“a success due to the kind of men it succeeded in attracting to it. They were of no particular class, comprising rich and poor, and from no particular state, but 'Tech' men have an individuality that marks them and explains their wonderful success."

*Magnum Gazabo, Class of '85.

Commenting on the more recent changes in the Institute, the speaker mentioned the growth of social life. In the early days it was all work and no play to such an extent that the students used to say, "Tech is hell." He also spoke of the growth of athletics, another feature of school life unknown to the old-timers.

In the beginning "Tech" had fifteen students and five courses of study: now there are fifteen hundred students and fourteen distinct courses. A marked feature of the recent history of the school, the speaker said, is the introduction of a course in chemical engineering, or industrial chemistry. The last century was marked by the application of physics, which made the nineteenth century what it was. This century will be marked by the application of chemistry to the problems of life. The laboratories at "Tech" have been thrown open to the manufacturers of the country, and many of them are taking advantage of the opportunity to solve their problems, even to the extent of sending their own men to the Institute.

Dr. Maclaurin then reverted to the subject nearest his heart,—the site problem of the Institute. The school has outgrown its present quarters, can handle no more students and has no room for expansion. The buildings, too, are either old or temporary in character, and, in his judgment, it is wise to begin to look around now for a new location before they are forced to do so. Moving would involve an expenditure of several millions, and the problem is to raise this money. A portion of the money can be raised by selling part of the present site, but restrictions placed on it by the original grant prevent selling a valuable portion of the land occupied in Boston. Therefore, there is but one way to raise the money needed, and that is by gifts from public-spirited citizens in Massachusetts and elsewhere. The Bay State is already more heavily laden with educational institutions of high grade than any other state, and the city of Boston is dominated by the Harvard influence. Since the failure of the proposed merger of Harvard and the Institute of Technology, there has been an unpleasant feeling existing on the part of the Harvard adherents toward "Tech."

The speaker then called the attention of the guests to the great work the alumni have been doing for "Tech" and the great assistance they can be in the site problem, not only financially, but in making known the simple facts of the great work the Institute is doing. Its graduates number men in the front rank in their professions all over the world. Every state in the Union is represented in "Tech's" student body, as well as every part of the civilized world, and the fees are twice as high as in most other schools and colleges.

In conclusion Dr. Maclaurin suggested the organization of a Technology Club at once, and the applause that followed as he took his seat was ample evidence that his suggestion met with hearty approval.

Professor Richardson next introduced A. F. Bemis, a prominent manufacturer of Boston, who spoke briefly, and was followed by several others in informal talks.—*Kansas City Journal*.

The musical clubs of the Massachusetts Institute of Technology of Boston, Mass., manufactured melody for an enthusiastic audience at Music Hall, Fine Arts Building, last night under the auspices of the North-western Association. It was strictly a "Tech" affair, "'rah, 'rahs'" for the Institute being everywhere interspersed by the audience during the performance. The "boys" were there in full force, from the youth with lip guiltless of down to his senior with grizzled thatch and no thatch at all; and they brought all the femininity of their households along.

The Mandolin Club, the Glee Club and the Banjo Club each in turn rendered selections.

Moving pictures taken at the Technology reunion at Nantasket last June were shown during the intermission, and familiar figures were thrown upon the canvas.

Following the concert, a smoker was given to the members of the Glee Club in the dining-room of the University Club.—*Chicago Evening American*.

The Massachusetts Institute of Technology Musical Clubs have reason to be thankful to the Boston Symphony Orchestra, for, if it had not been for the latter's entertainment at Convention Hall, the Twentieth Century Club's auditorium could not have begun to hold the crowds eager to hear the musical collegians. As it was, every available seat, as well as a lot of standing room, was taken with just the right sort of an audience for a concert of that sort.

As a general rule, the rendition of none of the three clubs—glee, mandolin and banjo—was remarkable, but the right spirit was there, covering up any minor defects, and carrying the crowd along in a genuine wave of enthusiasm. That the concert was a success, and that the proud Tech alumni will be eager to have the undergraduate musicians come another year, goes without saying.

It is so seldom that a Buffalo audience is really infected with the bug of college enthusiasm that to many in the house last night it must have been a pleasant revelation of what they themselves were capable. The concert was preceded by moving pictures of last June's commencement stunts at Nantasket Beach.

After the concert, as a wind-up to a busy day in which the Tech boys had appeared before the students of Lafayette and Masten Park High Schools, and at a débutantes' reception, they adjourned to the University Club, where there were refreshments. Here there lay in wait for them, not only the forty-nine members of the Technology Club of Buf-

falo, but many an "Eli," a Princetonian, Cornellian and the like, who really seemed thoroughly to enjoy eating the refreshments furnished for the "Tech" men.

Today the members of the musical clubs, embryonic engineers, are on tours of the Lackawanna Steel Plant and Niagara Falls, including the Gorge Route.—*Buffalo Evening News*.

Massachusetts Institute of Technology, represented by its musical clubs, invaded Rochester last night, and registered a triumph in a concert at the Alumni Gymnasium of the University of Rochester. Tonight there's going to be a basket-ball game, and five of the visitors will discard the buskin and chase the spheroid about the gymnasium for the glory of their Alma Mater. If the visitors win, they are entitled to the freedom of the city, and they'll go home to Boston with all the paraphernalia of Jijibbo J. O'Shea of glorious memory.

It was a mighty good programme that the visitors put on last night in the gymnasium. The cardinal and gray superseded Rochester's dandelion yellow in the decorations, and Massachusetts had it all its own way during the entire programme. Just before the dancing began, there entered a lot of upper-class students from East High School, and they added mightily to the fun of the dancing.

M. I. T. carries no skimmed representation on its trip through the country. Last night's musical performance introduced a round two-score of experts with the mandolin and banjo and of vocalists who made the gymnasium resound again and again with familiar and original selections.

As was to be expected, the Glee Club began the programme with "The Cardinal and Gray" and "Take me Back to Tech." Then there came a series of selections by the Mandolin Club and a collection of fancy stunts by the "Tech Kommers." The Banjo Club made its first appearance in a two-step, and the first instrumental solo was given by Laurence C. Shaw, who played Godard's "Berceuse" so nicely that he was compelled to give an encore.

Then came the inevitable "Stein Song" by the Glee Club, and W. C. Wilson sang a couple of old English ballads. The programme offered by the combined musical clubs ended with "Dear Old M. I. T.," rendered by all the available voices and instruments.

The end of the programme was by no means the end of the fun. Herman Dossenbach, with ten men, was ready to take up the thread of the music where the amateurs left off, and a whole room full of eager dancers fumed impatiently while the floor was being cleared. There were fourteen dance numbers on the programme, and the most faithful historian could not be expected to figure out the number of extras.

M. I. T. has a numerous clientèle of graduates in Rochester. William

E. Hoyt is president of the local organization of alumni, and the other officers are: first vice-president, F. W. Lovejoy; second vice-president, A. S. Crocker; secretary and treasurer, J. F. Ancona; executive committee, O. K. Foote, F. A. Cole and Charles F. Wray.—*Rochester Democrat Chronicle*.

Instead of being a problem to find entertainment for the Massachusetts Institute of Technology students who are coming here to give a concert Friday night in the Alumni Gymnasium, it has turned out a difficult bit of engineering for the committee to give everybody a student who signified a desire to entertain one or more. All the alumni put in applications early, and then came the claims of the local chapters of fraternities to entertain their own men, and now Rochester students returning from Tech for the mid-year vacation have sent in additional demands for students to entertain. There are about fifty men coming in the Tech musical clubs, and there are more than this number have signified an intention of entertaining them.—*Rochester Times*.

A Cosmopolitan Club Formed

An important step was taken last month when a Cosmopolitan Club was formed at Technology, with some 60 or 70 members. Although foreign students are not inclined to get together, immediately on the formation of the club and the occupation of the club-room on Boylston Street, directly across from Rogers Building, the foreigners began to fraternize with each other most cordially, and it is believed that this new social link will prove of great value.

The officers are: president, Eugene Olaf Christiansen, '10, of Christiania, Norway; first vice-president, Heenan Tinchin Shen, '11, of Foochow, China; second vice-president, Manuel Adrian Navarro, '10, of Quito, Ecuador; secretary-treasurer, David St. Pierre Gaillard, '11, of Culebra, Canal Zone, Panama; councillors: Professors Desire Despradelle, of Paris, France, of the Department of Architecture; Dean A. E. Burton; and Gorton James, '10, of Brookline.

The club has had two or three meetings, at one of which President Maclaurin was the guest.

BOOK REVIEWS

CLASS OF '93, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, FIFTH CATALOGUE. (Frederick H. Fay, Secretary, 491 Boylston Street, Room 37, Boston, Mass.) Paper, 6 x 9 inches; pp. 196; four plates.

It is sometimes claimed that students in the engineering schools lack something of the college spirit, the loyalty to their institutions, the pride in their respective classes, etc., that distinguish the undergraduates of the classical colleges. The publication before us is a rather remarkable illustration of the strength of class spirit among the graduates from the Massachusetts Institute of Technology in the Class of 1893. This book of nearly two hundred pages contains a complete biographical record of the members of the class since their graduation, an index showing their geographical distribution, a record of the class meetings held and other matter relating to the institution generally. Some very interesting pages are those which give the statistics of professional incomes earned by members of the class. It appears that in 1896, three years after graduation, 20 members of the class had incomes averaging \$1,098. In 1903 185 members of the class had incomes ranging from \$35,600 for the highest to \$500 for the lowest, and the average was \$3,082. In 1908 152 members of the class reported: 2 of them were receiving incomes above \$50,000; 4 others had incomes ranging from \$20,000 to \$50,000, 10 others had incomes between \$10,000 and \$20,000, 31 others had incomes between \$5,000 and \$10,000, 38 had incomes between \$3,000 and \$5,000, 25 earned between \$2,500 and \$3,000, and 37 earned between \$1,500 and \$2,500. This gives an average income for the 52 members amounting to \$5,576 per annum, but it should be said that not all the members of the class reported, and that it is likely that those who did not report were among the number who were in receipt of small incomes.—*The Engineering News.*

AN ANALYSIS OF THE UNITED STATES STEEL CORPORATION WITH CHART OF QUARTERLY EARNINGS SINCE ITS ORGANIZATION. By Charles Wilson Taintor, '93. Boston, 1909.

This publication by Mr. Taintor is very compact in form, as it consists simply of a folder containing two large sheets printed on one side. The first page is a statistical chart on cross-section paper, and the second is a brief analysis and explanation of the curves and figures on the chart.

The chart consists of two parts: first, a series of eight curves drawn in different colors to show the amounts set aside out of the earnings of the corporation for sinking fund, depreciation, etc., for each of the thirty-three quarters covered by the study; the second, a broad vertical line divided into the same colors to show the average amounts appropriated to each purpose during the period covered. These rather familiar statistical devices have been employed in this study by Mr. Taintor with striking effect. The scale adopted and the arrangement of colors render it easy to see at a glance not only the total earnings for each quarter, but just what the corporation did with those earnings. It may be worth while to note, in passing, that the curve indicating the total earnings per quarter exemplifies by its quick and extreme fluctuations the truth of Andrew Carnegie's assertion that the steel industry is "either a prince or a pauper." The great steel corporation has been able to hold prices fairly steady, but it could not, or, at least, did not, prevent its own earnings from falling off nearly two-thirds in nine months, June, 1903, to March, 1904, or from \$36,600,000 to \$13,200,000. From this low point the quarterly earnings rose by leaps and bounds to \$45,500,000 in June, 1907, or an increase of about 245 per cent. in three and one-quarter years, which was followed within the next nine months by another sudden drop of \$27,300,000.

These points of low earnings came within periods of general industrial depression which affected all lines of business to a greater or less degree. They are significant for the reason already given and because they show the rather severe tests to which this great combination has been subjected during its brief career. The corporation has weathered the storms of these two periods without material damage, and has shown its great powers of resistance.

On the whole, the record graphically presented by means of the chart seems to warrant the author's conclusions that the corporation has been well managed, that the bonds are a safe investment, and that even the common stock will establish a good dividend record. It is apparent that the tremendous earnings of this great organization have justified the optimism of its promoters, whether such earnings can be in themselves justified in the final analysis or not.

C. W. D.

CLASS OF '84, MASSACHUSETTS INSTITUTE OF TECHNOLOGY, TWENTY-FIFTH ANNIVERSARY BOOK. Cloth, $6\frac{1}{2}$ x 10 inches. pp. 134. 28 plates.

In its "Twenty-fifth Anniversary Book," recently issued, the Class of '84 has set the pace for other classes to follow. It is a book of rare interest, not alone to '84 men, but to all alumni and even to those who have no Institute connection, for it deals primarily with a quarter-century

of the most interesting period of the lives of the one hundred and one class members; and the biographical sketches have the merit of not being over-edited, but of reflecting the personalities of the individuals themselves. Most of the biographies are accompanied by portraits, showing the members both at the time of leaving the Institute and at the present, and it is fascinating to study the faces and note the changes that twenty-five years have wrought.

The book is carefully planned throughout, and contains, besides the biographies, a list of the members with their addresses; a short chapter of statistics, followed by a register of marriages and children and the class necrology; a retrospective sketch of the Institute from 1880 to 1909, with portraits of Presidents Rogers, Runkle and Walker and of the members of the Faculty during '84's undergraduate days; letters from Robert H. Richards, '68, and James P. Munroe, '82; and an account of the observance of the twenty-fifth anniversary of the class at the Tech Reunion of 1909.

In typographical excellence, and with its attractive binding in cardinal cloth with silver inscription, the book stands in the Technique class as a fine example of the printer's art. The class of '85, whose silver anniversary is to be celebrated this year, will have to bestir itself if it is to follow the lead of its old-time rival.

When it is stated that the committee in charge of the book consisted of H. W. Tyler, A. H. Gill and W. L. Puffer, it will not surprise the alumni to find that '84 has produced results creditable to the alumni of any college.

F. H. F.

THE SECOND BOOK OF '89. Published by the class of '89, Massachusetts Institute of Technology. Cloth. 6 x 8. 96 pp. Copiously illustrated.

It is a pity that every Tech man cannot have an opportunity of reading over this little narrative of the celebration of the twentieth anniversary of the class of '89. The story of the reunion, delightfully told by Wales, has the effervescence of a soda fountain, touching lightly here and there on the foibles of individuals, incidents in class history and episodes of the reunion, and in many cases thinly disguising the sentimental features that such a reunion cannot fail to develop.

The story of the reunion at Marion is followed by a description of the part '89 played in the Reunion celebration of last year. The book also contains a complete directory of the class with short biographical notes.

NEWS FROM THE CLASSES

1868.

PROF. ROBERT H. RICHARDS, *Sec.*, Mass. Inst. Tech., Boston, Mass.

I have just returned from an extensive trip where I read papers before the American Institute of Mining Engineers, March 1, at Pittsburg, and before the Canadian Mining Institute at Toronto. The papers appeared to interest the engineers very much, especially at the Toronto meeting. When at Pittsburg, some Tech men got together and gave a very pleasant hour at the University Club after the meeting. The list is as follows: Luther K. Yoder, '95; S. B. Ely, '92; James O Handy, '88; Colbert A. MacClure, '94; Fred Crabtree, '89; Henry D. Shute, '92. We compared notes and told stories, and then we were immensely entertained by Ely, who did card tricks for our entertainment. His skill is so great he can do the kind of things Keller does, leaving his audience completely in the dark as to how he does the trick. At Toronto I was entertained at the National Club through the kindness of Mr. N. K. B. Patch, Class of '01. Mr. Patch, in spite of his trouble with his eyes, appears to be winning a fine place for himself in the business world. He is very highly esteemed in Toronto. At Buffalo I was very delightfully entertained by Mr. Maurice B. Patch, '72, and in the evening of March 5 he brought together quite a bunch of Tech men, a large number when the shortness of the notice is considered. The list is as follows: Maurice B. Patch, '72; George A. Ricker, '86; Warren C. Tudbury, '00; G. M. Johnstone Mackay, '08; R. W. Lindsay, '07; C. B. Morey, '06; M. L. Fish, '95; C. H. White, '09; W. L. Spalding, '05; N. W. Shed, '81; W. M. Corse, '99. We were given a very good dinner at the Buffalo Club, and then we spent the rest of the evening comparing notes on the different periods to which we belonged. I felt a little guilty to be accepting hospitality from these men, as they have had rather more than their share of entertaining lately, having given a hearty welcome to the Glee and Banjo Clubs, the basketball team and Dr. Maclaurin.—The secretary has received a pleasant letter from Ellery C. Appleton, which is from Wadesboro, N.C., where he is resident engineer for the Winston-Salem South Bound Railway, running across the state from Winston-Salem to Wadesboro for ninety miles, where it connects with the Atlantic Coast Line.

1875.

EDWARD A. W. HAMMATT, *Sec.*, Hyde Park, Mass.

The secretary has recently been in Oregon and California on business, and had the pleasure of meeting Abbott and Edes in San Francisco and Patton in Chicago. He learned that W. F. Sargent is commissioner of public works at Oak Park, Ill.—The twenty-eighth annual meeting and dinner of the Class of '75 was held at Young's Hotel, Boston, on March 11, 1910, at 7.30 P.M., with the following members present; namely, Beal, Bowers, Dorr, Hammatt, Hibbard, Mixter, Plimpton and Willard. Hammatt somewhat unexpectedly arrived from New York just in time to attend the meeting. Letters were read from Shockley, Warren, Goodale, Cushing, Hughart and Kinnicut. The usual reports were presented and accepted, and the old board of officers re-elected to serve another year. Adjourned at 10.45 P.M.

1877.

RICHARD A. HALE, *Sec.*, Lawrence, Mass.

The annual reunion and dinner of the Class of '77, M. I. T., was held Wednesday evening, February 23, at the Technology Club, Boston. The meeting was informal in its character, and no special programme was arranged and but few remarks were made by various members. Letters of greeting were read from absent members. The secretary is preparing a class directory, giving a short sketch of the lives of the members and any matters of interest to those who are distant and unable to attend meetings. It is proposed also to publish half-tone cuts, showing the members as they appeared thirty-three years ago and at the present time. The officers elected for the present year were: Charles F. Lawton, president; Joseph P. Gray, vice-president; R. A. Hale, secretary and treasurer. Announcement was made of the death of E. Harley Gowing, Nov. 24, 1909, who died from injuries received in an acetylene gas explosion in Millinocket, Me. He was an active member of the class, and had a deep interest in Tech matters. A memoir was read by the secretary, and a committee, consisting of the president and secretary, was appointed to prepare suitable resolutions to send to his family and also enter on the class records. The following members were present: John Alden, chemist of Pacific Mills; William B. Bradford, draughtsman, United States Navy Yard, Charlestown; Erskine Clement, of the firm of Clement, Parker & Co., stock brokers, Boston; E. W. Davis, publisher, Boston; A. S. Glover, secretary of the Hersey Manufacturing Company, Boston; Joseph P. Gray, president Boston Manufacturers' Mutual

Insurance Company, Boston; Walter Jenney, vice-president of the Jenney Refining Company, South Boston; George W. Kittredge, chief engineer New York Central Railroad, New York city; Charles E. Lawton, superintendent of streets and sewers, New Bedford; B. C. Mudge, manager Oxford Linen Mills, North Brookfield; George A. Nelson, assistant city engineer, Lowell; A. S. Locke, with Waltham Watch Company, Waltham; A. L. Plimpton, chief engineer surface lines of Boston Elevated Railway Company; C. H. Peabody, professor of naval architecture, Massachusetts Institute of Technology; F. E. Peabody, of the firm of Kidder, Peabody & Co., bankers, Boston; H. C. Southworth, mining engineer, Stoughton; Arthur W. Thayer, musician, composer and director of musical organizations, Boston; Richard A. Hale, consulting engineer, Lawrence, Mass. Considerable discussion was had in regard to the lack of interest of a number of the members in regard to forwarding material for the directory. No responses have been received from a number of the class, and a greater number have not sent a photograph for half-tone reproductions, and apparently are not interested in making the directory complete. The secretary was authorized to do whatever was possible to have these matters completed at an early date and to write to those members who had not responded. The data should be sent in promptly, as the material is to be sent to the printer at an early date.

1879.

EDWIN C. MILLER, *Sec.*, Wakefield, Mass.

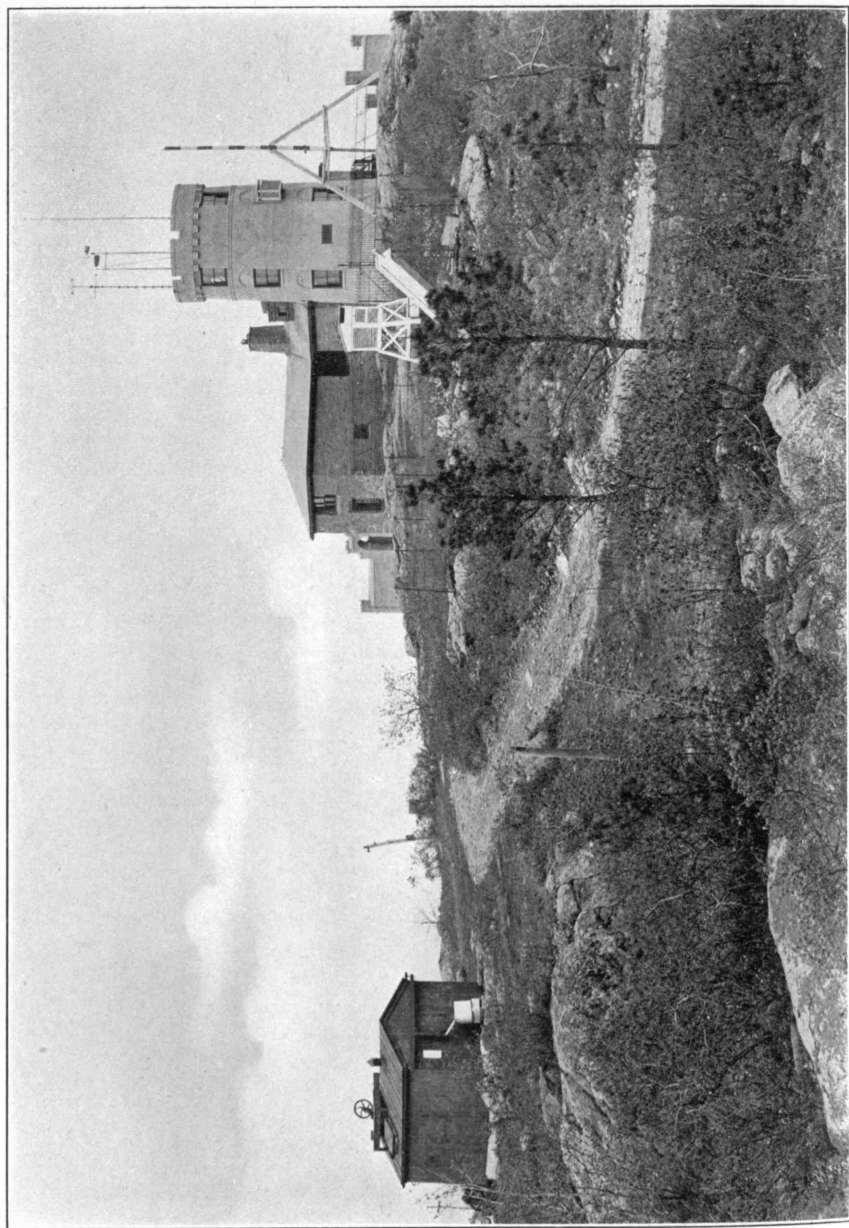
The thirtieth annual meeting of the Class of '79 was held at the Hotel Brunswick on Saturday evening, Jan. 15, 1910. The affair was an informal one, there being present John W. Cabot, Fred S. Coffin, Alan V. Garratt, Henry G. Hall, Edwin C. Miller, Professor William H. Pickering, Frank G. Stantial and Sullivan A. Sargent. Interesting letters were read from Colonel Richard H. Morgan, Arthur M. Waite, of New York; Professor R. W. Lodge, Wilson Eyre, of Philadelphia; Major Philip Little, of Salem; A. B. Harlow, of Pittsburg; Louis P. Howe, Fred H. Lane, of New York, president of the class; George F. Riggs, of Carlisle, Pa.; W. W. Macfarlane, of Chester, Pa.; Walter S. Allen, of Boston, and Horace J. Howe, of New York. Other members of the class heard from were: S. T. Braley, of Rutland, Vt.; Professor George H. Barton, J. F. Batchelder, of Hood River, Ore.; W. O. Dunbar, Altoona, Pa.; Charles L. Fellows, Harry B. Fullerton, of Long Island; C. S. Gooding, W. S. Hazeltine, D. C. Hemingray, of Covington, Ky.; Walter Large, of New York; F. B. Knapp, of Duxbury, Mass.; W. H. Rea, Pittsburg, Pa.; Vibe K. Spicer, of Chicago; and Alfred T. Waite. The following

officers were elected for the year 1909 and 1910, twenty-nine ballots being cast: president, Richard W. Lodge, Boston; vice-president, Allen M. Jenks, New York; secretary, Edwin C. Miller, Wakefield, Mass.; business committee, Louis P. Howe, Marlboro, Mass.; Richard H. Morgan, Plymouth, Mass.—Harry H. Campbell is still at Hotel Chalfonte, Atlantic City, where he has been for some time past, trying to regain his health. He is able to do considerable mental work, but cannot yet leave his bed. He would be glad to hear from any of his old friends.—Philip Little, of Salem, held an exhibition of his oil paintings at 103 Newbury Street, Boston, on February 7-21, inclusive. His work as an artist has been very successful, and his pictures have put him in the front rank of young American artists.—Professor R. W. Lodge has been spending the winter on the Pacific coast, the early part in Seattle, Wash., and later at Los Angeles, Cal.—Colonel R. H. Morgan sailed for Europe in January, not to return to this country until June.—Harry B. Fullerton, who has charge of the agricultural experimental station on Long Island, has been delivering a few illustrated lectures before agricultural societies of Massachusetts and elsewhere. Without doubt he is one of the best authorities in the United States in the field of experimental agricultural and horticultural work, and has done some wonderful things at his station on Long Island.—Vibe K. Spicer wrote the secretary in January as follows: "I am in Montreal, the pole is within reach and the Class of '79 shall be the first to examine my notes. Put no reliance in Cook or Peary." Nothing further has been heard from him, however.

1882.

WALTER BRADLEE SNOW, *Sec.*, 170 Summer Street, Boston, Mass.

The twenty-eighth anniversary dinner was celebrated on Thursday evening, February 3, at the Boston City Club. The following men were present: Cheney, French, Hall, Herrick, Munroe, Snow, Walker and Warren.—George E. Warren, who is now located at the Beverly plant of the United Shoe Machinery Company, has moved his residence to 11 Outlook Road, Swampscott, Mass.—Harry G. Manning is now chief engineer of the Ross Pumping Station, city of Pittsburg, Pa., and is engaged in an advisory capacity in the design of another very large pumping station.—Miss Clara Preston Ames will conduct a small party on a four months' trip to Europe, sailing from Boston for Genoa May 14 on the steamship "Romanic," of the White Star Line. The return will be made from Liverpool by the "Saxonia," of the Cunard Line, which is due in Boston, September 9.—George W. Mansfield writes from Tampa, Fla., that he is very busily engaged with the Tampa Electric Company.



BLUE HILL METEOROLOGICAL OBSERVATORY FROM THE NORTH-EAST

1884.

PROF. H. W. TYLER, Sec., Mass. Inst. of Tech., Boston, Mass.

Annual dinner of the Class of '84. The annual dinner of the Class of '84 was held at the Technology Club on Thursday, Feb. 10, 1910. The following guests and members of the class were present: guests: Professors Richards, Cross, Lanza and Whitaker and Mr. J. P. Munroe; members: Adams, Appleton, Bardwell, Bennett, Bridgeman, Coburn, Dearborn, Doane, French, Gill, Holder, Lull, Mellen, Prescott, Puffer, Rotch, Stuart, Tyler, Ward. The secretary presented the new Class Book to members and guests with brief introductory remarks. There were pleasant informal talks, mainly reminiscences of the early days of the Institute, by the guests and members of the class. Letters were read from Professors Niles, Osborne, Vose and Wing, also from Messrs. Bunce, Newell and Otis.—H. F. Otis, whose summer home is in Nahant, has recently opened there a small laboratory and museum of local natural history, which is said to contain much material of interest on the historical side as well.—F. F. Johnson, who has been for some years president of the First National Bank of Wallace, Ida., has recently become cashier of the Boisé City National Bank in Boisé City. Mr. Johnson organized the First National Bank of Wallace in 1892, and has conducted it with much success. He is also president of the First National Bank of Twin Falls, of the First National of Kellogg and of the State Bank of Idaho. Last year he was president of the Idaho Bankers' Association, and is now chairman of its executive committee.—W. H. Bunce has returned from some months' residence in Argentina.

At the request of the REVIEW Mr. Rotch has written a short account of a quarter of century of work at the Blue Hill Observatory, which he founded and has since maintained:—

THE BLUE HILL OBSERVATORY

When a private scientific establishment has completed an existence of a quarter of a century, it may be considered as a permanent institution and as such worthy of public notice.

The Blue Hill Observatory was founded by A. Lawrence Rotch, a graduate of the Department of Mechanical Engineering of the Institute in the Class of 1884, the following year. Its objects were stated in *The Tech* of Dec. 3, 1884, to be as follows: "The investigation of the amount of rainfall at this elevation (635 feet), the velocity and direction of the wind, the maximum and minimum temperatures, the paths of thunder and local storms and such other phenomena as may suggest themselves." The Observatory was first occupied by Mr. Rotch and his ob-

server, Mr. W. P. Gerrish, on Feb. 1, 1885, and observations have been made continuously since that time under unrivalled and identical conditions of exposure, unlike the stations of the United States Weather Bureau. The Observatory was one of the first stations in the United States to be equipped with self-recording instruments, and is one of the few in the world today where nearly every element is continuously recorded. No private station has studied the upper and lower air so well. Many new types or modifications of existing instruments have been made by Mr. S. P. Fergusson, who joined the Observatory staff in 1887, and is still a member. Mr. H. H. Clayton replaced Mr. Gerrish (now of the Harvard Observatory staff) in 1886, and served as observer and meteorologist with some interruptions for a period of twenty-three years. His investigations brought distinction to himself and the Observatory. Mr. A. E. Sweetland, who died after eight years' service, was succeeded in 1903 by Mr. L. A. Wells, and he, together with Mr. Fergusson and Mr. A. H. Palmer, are at present the assistants of Professor Rotch, who assumes the direction of the work and the burden of the expense. The work of the Observatory soon outgrew the first conception of the founder of merely obtaining ordinary data. Local weather predictions were early begun, and continued until the United States Weather Bureau commenced similar forecasts at Boston in 1891. The first measurements in America of the height and velocity of clouds, by trigonometrical and other methods, were made at Blue Hill in 1890-91, and were repeated in 1896-97 as part of an international system. These researches and the first applications of kites in 1894, at the suggestion of Mr. W. A. Eddy, to obtain meteorological observations in the upper air by means of instruments recording graphically and continuously, made the Observatory widely known. The use of cellular kites flown with steel wire and controlled by a power windlass was developed at Blue Hill, and subsequently adopted by the United States Weather Bureau and many stations abroad. In 1899 kites were used to elevate the terminal wires in experiments in wireless telegraphy between Blue Hill and Cambridge. In 1901 Professor Rotch and Mr. Sweetland made a transatlantic voyage to demonstrate that kites might be flown at sea in calm weather by utilizing the motion of the vessel to create an artificial wind. A more complete exploration of the air over the ocean by this method was made by Mr. Clayton in a voyage to Gibraltar in 1905, after which, on a steam yacht sent to the equatorial Atlantic through the co-operation with Mr. Rotch of a French colleague, M. Teisserenc de Bort, both kites and pilot-balloons were used to investigate the trade-winds. The unprecedented height of three miles was reached by kites at Blue Hill in 1900, and kite flights are still made there once a month, to obtain temperatures at much greater heights. Free

balloons carrying self-recording instruments were employed for the first time in this country by Professor Rotch during the St. Louis Exposition, and continued there for four years. Of the seventy-six balloons sent up from St. Louis, seventy-two were recovered. The heights occasionally exceeded ten miles, and a temperature of 111° F. below zero was registered, which is one of the lowest natural temperatures ever observed. Such sounding balloons sent up by Professor Rotch from Pittsfield, Mass., are not so often recovered, but pilot-balloons, followed by theodolites from Blue Hill, permit the direction and speed of the upper currents to be determined up to great heights in this region.

Aërological observations, as those in the free air are called, are now conducted at many stations throughout the world, which transmit their observations to the headquarters of the International Commission for Scientific Aëronautics at Strassburg, Germany, where they are published. Such observations, while undertaken in the interest of pure science, have a prospective value for aërial navigation, and it is probable that a station like Blue Hill, which already has counterparts, both government and private, will be necessary in each region to ascertain the conditions which may be expected to be encountered at different heights in the atmosphere by aërial craft.

The purpose of the Observatory continues to be mainly research, free from prescribed duties and independent of outside control. It is, however, attached to Harvard University, and publication is made in the *Annals* of the Astronomical Observatory. The building, on the summit of Great Blue Hill in the Metropolitan Park Reservation, has been three times enlarged, and the annual expense has increased to \$5,000 a year. Perhaps the most valuable part of the equipment is a library of about ten thousand books and pamphlets. Owing to interference with the work, the Observatory is closed to the public.

The value of a meteorological record increases with each year of observation, and, while twenty-five years' homogeneous observations of all the meteorological elements constitute a unique series in America, it is still too short a period to determine secular changes of climate. Therefore, it is to be hoped that the Observatory may have its existence prolonged, with unchanged environment and methods of observation, to the close of the century; but, since this transcends the life of an individual, the duty must devolve on the university to which it is allied.

A. L. R.

1885.

I. W. LITCHFIELD, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

The election of Charles R. Richards to the presidency of the National Society for the Promotion of Industrial Education will be interesting news to the class, and will mean much to the usefulness of the Association. Richards was largely instrumental in founding the association, and during its early existence acted as its secretary.—The Boston *Sunday Post* recently contained an interview with Little, in which he stated that there is a possibility that some day chemists will be able to prepare food from wood. The article is headed "Trees as Delicacies," and, besides giving an excellent picture of Mr. Little, the artist has shown him in the forest chopping down a tree and in another picture presiding at the breakfast table, where he is carving a cellulose roast. The artist has idealized the latter two pictures somewhat, but it is clear to see what his intention was.—Frank Page has purchased for the National Equipment Company, which is the holding corporation of the Confectioners' Machinery and Manufacturing Company of Springfield, of which Page is president, the entire stock of the Bausch Machine Tool Company of that city. The Bausch Machine Tool Company employs two hundred and fifty men.—At the alumni dinner, which was held at the Hotel Somerset January 19, there were seven members of the class present. Nye came up from New Bedford, and Fry strayed in from Claremont, N.H. The others present were Plaisted, Little, Talbot, Jim Kimball and Litchfield.—Mullins writes that he has been ill, but hopes that he will be able to meet with the class on the occasion of the twenty-fifth anniversary.—Nat Robertson writes that there is not much news about him, as practically the only thing thrust upon him recently was a national bank directorship.—Donald MacRae sent a dollar bill for class dues, and on the bottom of his letter his clerk has fixed the rubber stamp used for invoices, which says, "Please receipt and return this bill promptly."—The attendance at the annual dinner at the University Club, March 26, was larger than it has been before in years. The following men were present: Barr, Brown, Bartlett, Dodge, Hildreth, Homer, F. M. Kimball, J. Kimball, Litchfield, Little, Morss, Osgood, Pierce, Plaisted, Pratt, Rawson, Richards and Steel. Dr. Schubmehl was also present, and President F. M. Kimball presided. The officers elected for the ensuing year were: Charles A. Brown, president; I. W. Litchfield, secretary and treasurer. After reading a number of letters from absent members, the question of publishing a twenty-fifth anniversary book was discussed. It was finally agreed that we would publish a log book on the life at camp this year, and put off the Class Book until later. It was voted that the chair appoint a

committee on this matter to report at camp in June. It was then voted to establish Camp Walker at Sherwood Forest, Squam Lake, June 16, 17, 18 and 19, on the cordial invitation of Dr. Schubmehl. The advisory committee appointed last year, of which Morss is chairman, was appointed a committee on finance. Pierce told about the method of underwriting the expenses connected with the twenty-fifth anniversary of his class at Yale, whereupon the members of the advisory committee present held a hurried consultation, and stated that they would underwrite the expenses at Camp Walker. It was unanimous that Bob Richardson was to be Magnum Gazabo or something else of equal rank. The committee on the twenty-fifth anniversary consists of Little, Pierce, Morss, Richards, Hugh MacRae, Pickernell and the class officers.

1887.

EDWARD G. THOMAS, *Sec.*, 36 High Street, Brookline, Mass.

The annual dinner of the class was held Feb. 21, 1910, at Young's, and, though our numbers were smaller than usual, the meeting was thoroughly enjoyed by the men who came. Letters or other messages of good cheer were read from Shepard, Sever, "Jerry" Thompson and Sturges. Jerry says that he is "under inspection" of the navy doctors, who want to operate on him for amusement or curiosity, and he has settled down at the Battery Park Hotel, Asheville, N.C., to await their decision. We were all glad to have "Mon" Sturges write us that he is himself again, having fully recovered from his auto accident, and will be on hand for our next reunion. He wrote with great interest of the recent visit of the Tech Glee Club to Chicago, and says it seemed like old times to hear the old songs sung. Sever was elected president for the coming year, and Wakefield and Young vice-presidents. Bryant reported for the trustees of the class fund that Vose was very satisfactorily placed in Dr. Weed's home in Sax-onville. It was voted to send a letter of thanks to Mr. and Mrs. Segaller, of Brooklyn, who were most kind and unselfish in their attention to Vose during his stay in Brooklyn, in spite of the fact that he was a total stranger. We sang all the old songs, and adjourned only at a late hour. Those present were Bryant, Cameron, Coburn, Crosby, Hathaway, Haskell, Stewart, E. G. and F. A. Thomas, Lane, Wakefield, Young and Tripp.—Nickels passed through Boston in January on his way to his home in Cherryfield, Me. He is still located at Dee, Ore., where he has an apple orchard started and nearly ready to bear fruit. He still gives much of his time to mining work, and intends returning to Oregon in the spring.—Wakefield spent a week in Norfolk in February in connection with some houses he will build there.—

Sprague is much interested in amateur theatricals, and recently took the leading part in the one-act play "Circumstantial Evidence." The secretary, who saw him in this part, is glad to certify that he is really not awfully bad. We will put him down for a vaudeville act at our twenty-fifth anniversary. He has also been busy with professional work.—F. A. Thomas is chairman of the Greens Committee of the Pawtucket Golf Club.—Lane was a candidate for the new city council at the recent election in Boston, and came within 200 votes of election, standing highest among the defeated candidates. He has been active in civic matters, and was a member of the Common Councils of 1895 and 1896. He was president of the West Roxbury Citizens' Association for a long time, and now is chairman of their legislative committee.—Bryant was chosen president of the Boston Society of Civil Engineers at their recent annual meeting. He joined the society in 1888, and has served on many committees and last year as vice-president. His administration is likely to be of very great importance because of the pending proposition to build an engineering headquarters in Boston, in which all the engineering societies will have their offices and libraries, together with suitable halls for meetings. The Boston Society of Civil Engineers has taken the initiative in the matter, so that the completion of the project will be one of Bryant's interesting but strenuous duties. Bryant is the only member of '87 who has a son in the Institute.

1888.

WILLIAM G. SNOW, *Sec.*, 1108 Penn Mutual Building, Boston.

Relative to the differences between the president of the School Board of Chicago and Dwight H. Perkins, '88, which culminated in the trial of Mr. Perkins for insubordination and extravagance, now in progress, we have received the following communication from a Tech man, who has followed Mr. Perkins' work and the evidence shown at the trial closely:—

Dwight Perkins, '88, who has been architect of the Board of Education in Chicago since 1905, is having an unfortunate dispute with the political powers of the Chicago School Board.

Since Arthur R. Urion has been elected to the presidency of the School Board, he has attempted to offer a layman's assistance to the school architect. Because of Mr. Perkins' inability to comply with certain uncalled-for alterations that would have seriously injured the prospective schools from the standpoint of art and strength, Mr. Perkins has been temporarily suspended for incompetency, insubordination and extravagance, and a trial is to be conducted by the School Board. There is little chance that Mr. Perkins will be reinstated, but his reputation will only be augmented by his firm stand for substantial and artistic

school construction. Mr. Perkins has during his five years of service built approximately fifty school buildings for Chicago at an aggregate cost of approximately twelve million dollars.

Business and professional men, contractors and labor unions, are firmly supporting the architect, and are demanding a fair, open trial. It is greatly to be regretted that for purely personal and political reasons Chicago is to lose a man who has so efficiently served the city, and who has rendered so great a service to modern school architecture in the United States.

Mr. Perkins has already won a place among the "big four" (William B. Ittner, of St. Louis, Dwight Perkins, of Chicago, C. B. J. Snyder, of New York, and R. Clipston Sturgis, of Boston) of school architects in the United States, and by many is ranked as one of the best.

1889.

WALTER H. KILHAM, *Sec.*, 9 Park St., Boston.

New York dinner, Feb. 7, 1910. '89 celebrated its majority this year by breaking away from hoary traditions, and holding its twenty-fifth annual dinner (or twenty-first since graduation) in New York instead of Boston, and the occasion was so pleasant and the sights and sounds of the metropolis were so seductive that it seems doubtful if the class will ever want to settle down in Boston again. Most of the crowd from this end went over on the one o'clock train February 7, arriving at the Technology Club, New York, in time for the dinner. The following men were present: Spalding, Williston, Bosworth, Kunhardt, Hart, Davis, F. L. Pierce, Orrok, Rollins, Ayer, Underhill, Whipple, Crane, Bliss, L. A. Ford, Dunphe, Thurber, Whiting, Loring, Howard, Kilham, Lewis, Sauveur, Estabrook, also Dr. Mac-laurin, President of the Institute, as guest. President Thurber in the chair announced the resignation of Mott as secretary on account of his removal to Pittsburg, and Kilham was elected in his place. A vote of thanks to the retiring secretary was proposed and passed. A vote of thanks to Wales for his introduction to the Class Book was also proposed and passed. A keg of beer sent by Alley was received with great applause, Dunphe referring to the crowd as "mourners at Alley's bier." Whiting was elected to the Alumni Council to take the place of Kilham, who resigned to take over the office of secretary. Letters were read from Pierson, Hawkins, Bixby, Smyth, Pickering, Basford, Laws, Hoppin and Miss Woodman. Spalding, as member of the house committee of the Technology Club of New York, referred with great pleasure to the fact of the class holding their twenty-fifth dinner there, and said that this was the first representative class dinner so far held in the club, other dinners having been of organizations less famous than '89. A vote of thanks was passed to the local committee who did so much to make the

occasion pleasant. On motion of Whiting, President Maclaurin was made an honorary member of the Class of '89,—an honor which he accepted, although in exception to his general rule. The usual tax levy was passed, subject to the discretion of the "administration." As it was found that some of the fellows could never be present on the first Monday in February, the date of the annual dinner was changed to the last Monday in January. Williston suggested the creation of a life membership fund, entitling the participants to one seat perpetually at the class dinners without further payment, this fund to go to the Institute after the death of the last member. This scheme was referred to the president, who appointed a committee of three to consider it. After a pleasant and humorous talk by President Maclaurin, a social hour was spent, which closed one of the most successful class dinners ever held. Enough additional Class Books were subscribed for to greatly reduce the number in the hands of the secretary. A few still remain, and those who desire them should send for them at once, as from present indications the edition will soon be exhausted.—Bliss was elected last fall lieutenant-governor of the State of Rhode Island and Providence Plantations. For six or seven years previous to that time he had been a member of the House of Representatives, in which branch of the Assembly he was chairman of the House Committee on Finance for six years. He was president of the town council of his home town for several years.—Alley sailed January 28 for a three months' tour of the Mediterranean.—Hollis French has a daughter, Rue Elizabeth, born August 28, who after the arrival of the three boys was most welcome. Owing to his interest in early American silver and furniture, he has been invited to become a charter member of the new Walpole Society, composed of a limited number of collectors and connoisseurs of early Americans. This society expects to do most useful work connected with industrial and decorative arts in vogue in this country in the earlier days, and intends, through its various committees, to issue glossaries, to standardize methods of cataloguing and to publish brochures from time to time on various topics connected with these most interesting subjects. He is a member of the committee on silver, the results of whose work, it is hoped, will be of great value to collectors. Due to the growth of reinforced concrete work, he has established in his office a department on structural concrete engineering under the supervision of an engineer of wide experience in this class of work, and has already designed and erected a number of large concrete buildings. At the present time, among other things, he is engaged on plans for a five-story industrial plant, 600' x 80', with power station, dock and general development. He has also lately completed plans for all of the engineering work for the monumental group of municipal buildings to be erected at Springfield, Mass. Drawings for

a large central power station for the county and municipal buildings at Cleveland, Ohio, are also being worked on in his office. The Perkins Institution for the Blind are to build this year a most interesting group of buildings in Watertown, the engineering work for which is also in his hands.—Kilham's firm is engaged upon plans for the new High School of Commerce and School Administration Building for the City of Boston, which will be a nine-story fireproof building, the first of this type outside of New York. They have just completed a large and finely appointed reinforced concrete factory building in Cambridge, and have now under way two churches, grammar schools at Milton and Brookline, and several residences and business alterations.—The new secretary proudly records the election of Thurber as Treasurer of the Institute, succeeding Hart, who becomes a life member of the Corporation.

1890.

GEORGE L. GILMORE, *Sec.*, Lexington, Mass.

Joseph B. Baker is now at 50 Church Street, New York, N.Y., engaged in technical and engineering publicity work.—Mr. W. R. Whitney, the president of the American Chemical Society, presided at the convention held in Boston December 27 to January 1, and gave a lecture in the Lowell Building on "The Chemistry of Artificial Lighting," with experimental illustrations.—The address of Professor Edward Robinson is 25 Colchester Avenue, Burlington, Vt.—Allen H. Newell is at Milton, Calaveras County, Cal.—B. H. Mann is at 161 South Elm Avenue, Webster Groves, Mo.—Schuyler Hazard is with the Orleans County Quarry Company, Albion, N.Y.—Miss E. E. Bickford is a teacher at the Rhode Island Normal Institute, Providence, R.I.—Mr. H. C. Tuttle is living at the Technology Club in New York this winter.—Mr. F. W. Swanton is at 1371 Irving Street, N.W., Washington, D.C.—C. O. Churchill is superintendent of the Georgian Manufacturing Company, Binghamton, N.Y.—Mr. H. P. Spaulding held an exhibition of water-color work at the Copley Gallery in November.—Mr. T. N. Tripp, of Lynn, is connected with the Tripp Fruit Wrapping Machine. This machine is being largely used in California. The headquarters of the company are in San Francisco, Cal., and the machine is made by the Tripp Fruit Wrapping Machine Company at Marshall Wharf, Lynn, Mass. The machine has the capacity of wrapping one hundred oranges per minute, or more than a carload per day per machine. The fruit is so arranged that it is at all times moving on a gentle incline or over slow-moving belts, so that it is not damaged at all. Many of these machines are now in use in southern California at less than one-half the cost of hand wrapping. A special

committee of the California Fruit Growers' Exchange, which handles over 60 per cent. of the fruit crop of California, made an investigation of this machine, and reported most favorably on it. They stated specifically that the machine cut and printed the wrappers and wrapped the oranges one hundred per minute per machine, the expense being only about \$5.50 per carload, whereas the cost of doing the work by hand was \$11.50, to say nothing of the saving of printing and waste.—The Rev. George F. Weld, whose wedding occurred last year, is located at "Weldwood," Santa Barbara, Cal.—"Chick" Waite is with the Clinchfield Coal Corporation, Russell County, Dante, Va.—The Rev. Henry Meiser is at St. John's rectory, Kingston, N.Y.—F. B. Gowing's address is 200 Congress Street, Boston, Mass.—Mr. Charles F. Fitts is at 517 Railway Exchange, Chicago, Ill.—Mr. Austin D. Boss, who since receiving his degree has been with the American Thread Company, Willimantic, Conn., has been appointed assistant agent and manager of the mills. His father, General Boss, is the agent, and Austin will relieve him of many of the responsibilities.—Mr. H. P. Spaulding held an exhibition of water colors in his studio, 110 Tremont Street, Room 87, from January 31 to February 5, inclusive.—Colonel Charles Hayden is a director of the Shawmut National Bank, Boston.—This year will bring round our twentieth anniversary, and a grand reunion is planned, of which the particulars will probably be sent early in April. The plan now is that as many as possible visit the Hub for two days. One afternoon and night will probably be spent at the Vesper Club of Lowell, on the island, where golf, baseball and other sports will be enjoyed. The following night there will be a grand banquet, which gathering will take place at one of the clubs or hotels in the city. It is hoped that all will make an effort to be present and join in the festivities which are now being planned for the occasion.

1892.

W. SPENCER HUTCHINSON, *Sec.*, 1235 Morton Street, Mattapan, Mass.

John A. Curtin was re-elected on March 2 a selectman of the town of Brookline, leading the ticket.—George S. Keyes is a member of the firm of Curtis & Sanger, 33 Congress Street, Boston, Mass. They are bankers and brokers, members of the Boston and New York Stock Exchanges. Keyes is married, and lives at Concord, Mass.—Howard Gilmore, accompanied by Mrs. Gilmore, returned to Boston last month from a trip around the world. Their itinerary included Madeira, Gibraltar, Naples and Egypt. They crossed India, stopping at Bombay, Delhi, Agra, Cawnpore, Lucknow, Benares, Daejeeling and Calcutta, next visit-

ing in turn Rangoon, Singapore, Java, Borneo, Manila and Canton. In Japan they stopped in Nagasaki, Kobi, Osaka, Kioto, Yokohama and Tokio. On the way home they touched at Hawaii, and landed at San Francisco, and visited the Grand Canyon of Arizona before returning by rail to Boston.—John L. Harris is general manager of the Hancock Consolidated Mining Company at Hancock, Mich. This is a property which has attracted much attention in Boston during the past year, and in his annual report to the officers of the company, just issued in print, Harris goes into many interesting details regarding the development and equipment of the mine.—W. Spencer Hutchinson returned to Boston on March 16 from a six weeks' trip in Arizona, California and Mexico, on which he was accompanied by Mrs. Hutchinson. On February 8, at the Grand Canyon of Arizona, he ran into Howard Gilmore, who was just returning from his trip.—Arthur J. Ober is in the United States Engineers' Office at Newport, R.I., and during the past year has had charge of a party of about fifty men making surveys for a canal across the southerly part of Rhode Island from Watch Hill to Wickford, to form part of the proposed inland waterway from Boston, Mass., to Charleston, S.C.—Ambrose Packard is president of the J. S. Packard Dredging Company, 31 Market Square, Providence, R.I.—Gorham Dana is chairman of the committee of the Council to report on the advisability of establishing instruction in Insurance Engineering at the Institute. Dana is manager of the Underwriters' Bureau of New England, 93 Water Street, Boston.—Charles F. Park is director of the Lowell Institute School for Industrial Foremen,—a position he has held for the past seven years since the inception of this school. Park has achieved marked success in the constructive development in this new field of education. The School for Industrial Foremen conducts evening courses. The work is serious and the course severe, and, starting with students already skilled in practical branches, the school is turning out very strong men in civil, mechanical and electrical engineering. There are twenty-five men on the faculty of this school, all of whom are identified with the instructing staff of the Institute of Technology. Park has collected statistics from graduates of this school showing that the average salary increase two years after graduation has been 70 per cent.—George V. Wendell very recently has accepted appointment as professor of physics at Columbia University in New York city, where he will have charge of the instruction in physics for all engineering students. Wendell is just finishing his third year at Stevens Institute of Technology at Hoboken, where he has been in charge of the department of physics and dean of the second-year students. He has an enviable reputation as a teacher, and excited the same enthusiasm and popularity at Stevens as at Tech.

1893.

FREDERIC H. FAY, *Sec.*, 60 City Hall, Boston, Mass.

Herbert W. Alden has recently moved from Canton, Ohio, to Detroit, his address being care of Timken Detroit Axle Company, Detroit, Mich.—Charles V. Allen, who is a frequent contributor to the technical press upon the subject of electricity applied to mining, has recently published two articles in the *Electric Journal*, one in June, 1909, and the other in the January number of this year. The first is upon the "Operation of Mine Hoists by Electric Motors," and deals especially with the installation of the El Oro Mining and Railway Company, Limited, in Mexico, where for probably the first time on this continent a motor generator fly-wheel system is used for hoisting. The second article is entitled "Electrical Applications in Mining Work, with Special Reference to Mining Methods in Mexico," and deals with the application of electric power to a great variety of uses, such as the operation of ventilating, pumping and ore handling systems, crushers and rolls, stamp and tube mills, concentrating tables, sand pumps, cyanide plants and agitators. Allen has been in Mexico for about five years as engineer for the Westinghouse Electric and Manufacturing Company of New York, and has been engaged principally in water power electric transmission, mining and milling work. His address is Apartado 303 Mexico, D.F., Mexico.—That Bemis, as president of the Alumni Association, is "the man on the job," is shown by the following letter describing his recent trip with Dr. Maclaurin to local alumni associations in the middle west:—

The latter part of February I had a very interesting experience visiting a number of the cities in the middle west and being present with Dr. Maclaurin at the annual gatherings of a few of the local alumni associations. On February 24 there was a gathering in Kansas City of about twenty alumni, where steps were taken to organize a local association, Messrs. Richardson, '83, and Hoyt, '97, being appointed a committee for organization. At Chicago, February 26, the usual lively and enthusiastic annual meeting was held in the new University Club building. About a hundred were present, several coming from fifty to one hundred miles to attend. Hagar, '93, the president of the North-western Association for last year, gave a luncheon in the middle of the day before the dinner to Dr. Maclaurin and a few others, including two members of the Corporation. At the dinner in the evening, in the usual Chicago style, at the suggestion of Dr. Maclaurin, they raised \$560 for starting a crew.

I also was present with Dr. Maclaurin at meetings in Cincinnati (where I was pleased to see Ellms, '93), Cleveland and Pittsburg. Dates, '93, was elected president of the Technology Club of northern Ohio at Cleveland.

If there were time and space, I should like very much to go more into

detail regarding the meeting at each place I visited. Enthusiasm for the Institute, interest in its affairs and the kindest hospitality were typical of all places. Until one has taken such a trip, it is difficult to realize how interested all alumni are in the affairs of their Alma Mater and how ready they all are to lend a hand in helping preserve and build up the Institute, if they are only advised along what specific lines assistance is desired.

One of the chief problems confronting the parent association at present is how to increase the intimacy between the local associations and itself for mutual advantage and for the upbuilding of the Institute.

Dr. Maclaurin was enthusiastically received everywhere, and everywhere seemed to gain the hearty support of all alumni. The cordiality of the reception accorded everywhere must prove a great encouragement to Dr. Maclaurin in his work, as it certainly will to me in trying to perform my duties for the association. It was a thoroughly novel and enjoyable experience. I felt a good deal as Secretary Hitchcock might have felt eighteen months ago stumping the country with President Taft, speaking from rear platforms, visiting one-night stands and expressing an earnest interest in the same stories and statements at each place. Early in January I met a number of New Orleans alumni at lunch, and there as well found the same interest in Tech affairs and the same hospitality. We must bring the alumni throughout the country into closer touch with each other, and thus get the benefit of their active support, now partially dormant for the lack of greater intimacy.

—J. Winn Brown, with Silver, Burdett & Co., publishers, has returned from New York to Boston, his address being 221 Columbus Avenue, Boston.—T. Morris Brown, who was connected with the class in our senior year, and who has not been heard from since 1893, has recently taken up his residence at 9 Shailer Street, Brookline, Mass. Brown received his A.B. at Johns Hopkins University in 1891, and spent the following year there as a graduate student in electrical engineering. In 1892-93 he was a graduate student in electrical and mechanical engineering at the Institute, taking most of his work with '93. The years 1894 to 1899 he spent in shop work and draughting with the Walker Company, Cleveland, Ohio, and the following year he was draughtsman with the Wellman Seaver Engineering Company of that city. From 1900 to 1905 he was electrical engineer with the Brown Hoisting Machinery Company, Cleveland, Ohio, and for the four succeeding years was engineering salesman for the Ingersoll-Rand Company, Cleveland and St. Louis. Since November, 1909, he has been engineering salesman for the Taylor Iron and Steel Company, 100 Broadway, New York city, this company being engaged largely in the manufacture of high-grade and special steel castings at its factory at High Bridge, N.J. Brown was formerly a member of the Engineers' Club of St. Louis, and has recently transferred his membership from that society to the Boston Society of Civil Engineers.—Edward B. Carney, treasurer of the Lowell (Mass.) Institution for Savings, writes as follows:—

I read a paper at the annual Convention of the American Bankers' Association in Chicago last September on "Branch Savings Banks." It met with such success that nearly every one left the hall before I was half way through. This was the only savings-bank in the country that had made a success along these lines. I became vice-president for Massachusetts of the savings-bank section of the American Bankers' Association before I left. [The paper referred to was published in the *American Banker* for Sept. 23, 1909.]

Carney is also treasurer of the Lowell Board of Trade. Regarding his work he writes, "I am still plugging away, trying to earn enough to keep the wolf away from my auto."—Lawrence B. Dixon and Mrs. Eda Lord Young were married in Evanston, Ill., July 26, 1909, and now reside in Riverside, Cal.—Mr. and Mrs. Charles N. Johnson announce the birth of a son, William Alger, on Oct. 1, 1909. Johnson is a civil engineer in the quartermaster's department of the army, and is stationed at Fort Dade on Egremont Key, Fla. He writes that his work is interesting and varied, and in the two years that he has been located there he has had charge of the construction of buildings, roads, concrete walls, water and sewerage works, a railroad, an ice plant, etc., most of the work being built by contract, but some of it being done by day labor under his direction. He says that, except for a monthly trip to Tampa, he seldom leaves the island, but he likes the life and Florida very much, and hopes that he will not have to come north again, especially in winter. He speaks of a visit to Fort Dade of Captain Homer B. Grant, U.S.A., formerly of Woburn, Mass., and a friend of Crosby, whom many of the class met at a class reunion on March 15, 1902, when Captain (then Lieutenant) Grant was our guest, and spoke to us of his service in the Philippines. Johnson's address is Box 115, Egremont, Fla.—S. C. Keith, Jr., chemist and industrial biologist, has recently invented and applied for a patent on "the Keith automatic bubbling drinking fountain." The bubble type of drinking fountain has displaced the common drinking-cup in schools and other public places of the more progressive cities and towns. Keith's invention differs from other bubbling fountains in maintaining a constant height of bubble, or water jet, regardless of the varying pressure in the service pipe.—Henry A. Morss' office address is changed from 110 State Street to 201 Devonshire Street, Room 920, Boston.—Oren E. Parks and Miss Bertha Phelps Brooks, daughter of Mrs. John Cummings Brooks, were married at Westfield, Mass., Dec. 29, 1909. Mr. and Mrs. Parks reside at 111 North Elm Street, Westfield, Mass.—Walter T. Peck is acting manager of the Atlantic Radio Company, controlling the DeForrest Wireless Telephone and the Sparkless Wireless Telegraph System, with headquarters in the Union Trust Building at Baltimore, Md. This company is now putting in a line of wireless stations along the Atlantic coast from Baltimore to

Key West. The secretary recently ran across him in New York, where Peck spends about a week each month. Peck also devotes some time to his Washington (D.C.) office at Room 913, Evans Building, 1420 New York Avenue.—Leo W. Pickert sailed from Boston on the "Megantic," March 29, on a business trip to England and Ireland, which will probably keep him abroad for six months or a year, this trip being the outcome of a short trip to these countries which he made last November. Pickert's services will be missed in alumni activities, especially in connection with this year's Pop Concert, a function which he has managed admirably and with great success for many years.—In the fight against the Pittsburg grafters J. Ramsey Speer's interest is shown by the following clipping from an article in the *New York Times* of Sunday, March 27, 1910, describing the work of the Pittsburg Voters' League, which is pushing the prosecution of the grafters:—

The Voters' League is one of the unique institutions of Pittsburg. While its name implies that it is made up of a group of men interested in those things which pertain to voting, the Voters' League is in reality one A. Leo Weil, lawyer, one of the most successful in Pennsylvania. He is a reformer in every sense of the word. He reforms because he likes the work. He likes nothing better than to see the penitentiary gates close upon the back of a man who has betrayed his trust to the city.

The Voters' League was started several years ago to keep crookedness out of politics, as far as possible. Its early functions were to report upon the eligibility of candidates.

On the executive committee with Mr. Weil are such men as H. D. English, former president of the Chamber of Commerce; Joseph W. Marsh, general manager of the Standard Underground Cable Company; W. K. Shiras, F. R. Babcock, Willis F. McCook, George R. Wallace, J. Ramsey Speer and T. D. Harman, all well-known business men interested in social uplift.

—The engagement of A. B. Wadsworth was announced in the Brooklyn (N.Y.) *Life* for Jan. 8, 1910, in the following item:—

Announcement is made by Mr. Eugene Delano, of 12 Washington Square North, Manhattan, of the engagement of his daughter, Miss Caroline Delano, to Dr. Augustus Baldwin Wadsworth. The latter is a son of Charles Davis and Clara Blanchard Wadsworth, of this borough. Dr. Wadsworth was graduated from the Massachusetts Institute of Technology in 1893 and from the College of Physicians and Surgeons three years later. He also studied in Berlin and Vienna, and has frequently contributed articles on bacteriological and hygienic subjects to the leading medical journals.

—Cadwallader Washburn's work as a painter is mentioned in the Minneapolis *Sunday Tribune* for Feb. 20, 1910, as follows:—

With Cadwallader Washburn's painting, "The Gold Screen," winning the \$100 prize offered by the Woman's Club for the most meritorious work at the second annual exhibit of the Minneapolis Artists' League just closed, added interest naturally attaches itself to the successful artist.

Cadwallader L. Washburn, one of Minnesota's native sons who has attained distinction in the fine arts, is a son of W. D. Washburn, of Minneapolis. He was born in 1867, and lived in this city until his eighteenth year, when he went to Washington, D.C., to attend college. From Washington Mr. Washburn went to Boston, and studied at the Massachusetts Institute of Technology in the Class of '93. He began the study of art at the Art Institute's League of New York, and was a private pupil of William M. Chase for three years. Mr. Washburn's art studies were completed under Monsue Albert Besnard, of Paris, and Josquin Sorolea, of Madrid.

Beside being a brilliant painter in oils, Mr. Washburn has achieved a reputation as a painter-etcher also, being now engaged in a series of Mexican subjects. The first prize awarded him at the recent exhibition is but one of the many honors he has received on his work.

At the state art exhibition last year Mr. Washburn received the first prize for a still-life in oils, adjudged to be the best piece of work in oil or water color by a Minnesota artist.

"The Gold Screen," on which first prize was awarded at the League exhibition, is a painting of a nude woman crouched against a gold screen. It is a brilliant piece of work, though it has received some criticism on technical grounds. But, in spite of the subject being one that does not appeal to the popular taste and the criticism of its values, it is difficult to see how the jury of award could have done otherwise.

—Mr. and Mrs. William C. Whiston announce the birth of a son, Edward Andrew Whiston, born Oct. 20, 1909. The Whistons are living at 611 West 141st Street, College Station, New York city.

1894.

S. C. PRESCOTT, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

During a recent two-day trip to Washington the secretary had the good fortune to meet a number of '94 men.—C. G. Abbot and F. E. Fowle were found busily engaged in research and in the preparation of the annual report of the Astro-physical Observatory. Abbot is spending the winter in Washington, working up the results of his summer observations in southern California. While there during the past year he has been making plans for the erection of an observatory on Mt. Whitney, at an elevation of nearly 15,000 feet. This great altitude and the clearness of the atmosphere render this a particularly favorable place for certain desired physical observations and the study of meteorological problems. In addition to the work of the observatory Fowle finds time to act as treasurer of the Washington Society of the

M. I. T.—At Harvey's, C. G. Whiton, of New Bedford, was found at a near-by table. In addition to his work as treasurer and general manager of the New Bedford, Martha's Vineyard & Nantucket Steamboat Company, Whiton has been a leading member of an important committee consulting with the Treasury Department in regard to light-houses, signals, breakwaters, etc., along the Atlantic Coast,—a form of public service which requires special knowledge and deserves special mention.—On the train to New York was Azel Ames, now engaged in the manufacture of specially insulated wire, but so closely in touch with all matters pertaining to signal engineering that he is also called into service by the government as a consulting expert, and meets with the Department officials at stated intervals. Ames still retains his interest in military affairs, and wears with distinction his Spanish War Engineers' button.—C. N. Kinney is professor of Chemistry in Drake University, Des Moines, Ia., an institution of which he was a graduate before coming to Tech.—Scott has recently published some excellent suggestions to the milk producers of Providence, which show clearly the efficiency with which the office of milk inspector there is organized and administered. This has been entirely due to the creative force of Scott, who took a position which was a football of municipal politics, and has developed it into one of the best laboratories of its kind.—King has recently become prominent in New York as a result of a case recently tried by him, as assistant corporation counsel for the city, before the Supreme Court. The following clipping from a New York paper tells the story:—

A decision rendered yesterday by Justice O'Gorman in the Supreme Court means a saving of millions of dollars to the city in taxes already levied on bank stocks. Had the decision been adverse, the city might have been compelled to return taxes aggregating \$6,000,000 which were collected during the years from 1901 to 1908, inclusive.

In the fall of 1908 the Court of Appeals, on the petition of the Bridgeport Savings Bank, held that an assessment and tax levied on the bank's stock was illegal because there had been a failure to publish any notice or grant a hearing in relation to the assessments. This omission by the Tax Commissioners, the Court of Appeals ruled, was a fatal defect.

As the commissioners had failed to give any notice or hearing in relation to any of the assessments of this character since 1901 and the taxes had been paid, the situation was critical for the city. An act was passed to correct the defect in the levying of assessments by permitting the Tax Commissioners to publish a notice and grant any hearings desired, this to cover all assessments made on bank stocks since 1901.

The American Exchange National Bank, whose stock had been assessed for 1907 at \$9,600,000, and the Consolidated National Bank, now known as the National Reserve Bank, on the stock of which an assessment of \$2,100,000 had been made, brought proceedings after the passage of the curative act to have the assessments set aside and the taxes they paid, \$96,000 and \$21,000, respectively, returned to them. Their counsel pleaded that the curative act was unconstitutional.

This proceeding was carried to the Court of Appeals, where it was held that the curative act was constitutional, and that the assessments must stand if the Tax Commissioners complied with the terms of the curative act. The proceedings were then sent back to the Supreme Court to have the facts determined.

Justice O'Gorman heard the evidence Monday and decided yesterday the Tax Commissioners had fully complied with the requirements of the act. Assistant Corporation Counsel William H. King tried the case for the city, and expressed himself last night as much gratified over the result.

—W. R. Westcott is electrical engineer with Lord & Burnham Company, Irvington-on-Hudson, N.Y.—R. Wason has become senior partner of the firm of Perry & Co., fittings manufacturers, 21 Grafton Street, Bond Street, London.—H. E. Warren, in addition to his work as superintendent of the Lombard Governor Company at Ashland, is chairman of a committee intrusted with the problem of securing and installing a water supply for the town.—Torossian is city engineer for Lome, Bulgaria.—Knapp is superintendent of blast furnaces of the Thomas Iron Company, Hokendauqua, Pa.—Tenney is vice-president Malden Electric Company.—Taber is engineer in charge, Designing Division Department of Water Supply, Gas and Electricity, Borough of Brooklyn.—Sperry is a naval architect in San Francisco, with an office at 163 Main Street.—Sayward is engaged in publishing work at 166 Devonshire Street, Boston.—H. S. Reynolds is with the Ludlow Manufacturing Associates, Ludlow, Mass.—Quevedo is back at West Point as instructor in Spanish and history in the United States Military Academy.—Patch is constructing engineer in the United States Reclamation Service, now stationed at Klamath Falls, Ore.—McJennett is teaching in the Stuyvesant High School, Washington Square, New York.—McGoodwin is associate professor of architecture and acting dean of the School of Applied Design, Carnegie Technical Schools, Pittsburg.—Hopewell is a member of the firm of Hopewell Brothers, mechanical and electrical engineers, Newton, Mass.—McClure is to lecture before the students of the Department of Architecture at an early date.—Coolidge is assistant general manager Pacific Telephone and Telegraph Company, San Francisco.—Farnsworth is now located in Helena, Mont., as assistant superintendent, Stone & Webster Engineering Corporation.—Anderson is with the Baldwin Locomotive Works, Eddystone, Pa.

1895.

GEORGE A. ROCKWELL, *Sec.*, 101 Tremont Street, Boston, Mass.

On Feb. 1, 1910, a class dinner was held at the Boston City Club. Those present were: J. L. Newell, F. L. Richards, W. E. Davis, T. B. Booth, W. H. Winkley, W. D. Parker,

E. H. Clapp, R. J. Williams, George Defren, A. D. Fuller, J. Williamson Cook, C. W. Berry, A. C. Jones, G. A. Rockwell. Letters of regret were received from Benjamin Adams, Edward H. Huxley, Henry D. Jackson, W. C. Powers, L. K. Yoder, Edward A. Tucker, and A. L. Canfield. A full discussion of the proposed class reunion to be held next spring was had, and the general opinion seemed to be that the best time for the reunion would be early in June. A committee composed of E. H. Clapp, chairman, William E. Davis, William H. Winkley, Roger J. Williams and J. Williamson Cook was appointed to select definitely a place and time for the reunion, and all the members of the class are invited to send suggestions to that committee, which is expected to report at the next class dinner to be held in April.—H. K. Barrows, M. Am. Soc. C. E., and C. B. Breed, '97, Assoc. M. Am. Soc. C. E., have entered into partnership for the general practice of civil engineering under the firm name of Barrow Breed. Mr. Breed, now assistant professor of civil engineering at the Massachusetts Institute of Technology, has carried on for some time a consulting practice on railway grade crossing elimination, general masonry construction and litigations involving railway, highway and foundation construction. Mr. Barrows' appointment to succeed Mr. William E. Mott as associate professor of hydraulic engineering at the Massachusetts Institute of Technology was noted in our last issue.

1896.

CHARLES E. LOCKE, *Sec.*, Mass. Inst. of Tech., Boston, Mass.

Changes of address have been received as follows: Henry D. Barto, 1067 W. 23d Street, Des Moines, Ia.—W. T. Dorrance, Union Station, Albany, N.Y.—Dr. H. S. Gilman, 149 Newbury Street, Boston.—Charles E. Hollander, Newark Telephone Company, Newark, Ohio.—Charles Morris, Jr., United States Navy Yard, Boston.—C. S. Newhall, care of F. O. Story, 807 H. W. Hellman Building, Los Angeles, Cal.—At the alumni dinner at the Somerset '96 filled a table. Merryweather came on from Cleveland, and from the vicinity of Boston we had Rockwell, MacLachlan, F. H. Smith, C. O. Tucker and the secretary. Morris intended to be present, but did not show up.—Billy Anderson appeared in Boston for a day in February. He is working hard as president of the Ferro Concrete Company of Cincinnati, Ohio,—so hard that he has decided to take a little vacation with Mrs. Anderson this summer, and visit Hawaii and Japan.—Massachusetts papers contain considerable material in regard to Butler Ames' aspirations for Senator Lodge's seat. The general opinion seemed to be that, while Ames was a coming man, still

Lodge had too strong a hold on the machine to be readily dislodged.—Some of the fellows have been appearing in print, especially Burgess, who has a paper on the estimation of the temperature of copper which appears as a bulletin of the United States Bureau of Standards.—Thompson has given some of his experiences at the Amoskeag Mills in an article entitled "Compressed Air in Textile Mills," which appeared in *Compressed Air*, September, 1909, and also in other periodicals.—In the recently formed University Club of Delaware we note that D. M. Bates was active in the organization of the club, and at its first election became a member of its executive committee.—The following clipping is taken from the Oakland (Cal.) *Enquirer* of Jan. 1, 1910:—

The People's Water Company, which serves the citizens of Oakland and the east bay shore, has had in operation for two and a half years a fully equipped Department of Sanitation. To be exact, this department was organized in February, 1907, nearly three years ago.

It is the duty of the Department of Sanitation to keep constantly advised of the condition of the water, both in the supply sources, in the distributing reservoirs and pipe lines, and to take such measures as may be necessary to correct any deterioration of the water below the standard of perfection which has been established.

The men in charge of the Department of Sanitation are equipped by thorough training in the best institutions of the country, and to this they have added years of experience in the practical handling of sanitation work in connection with water companies.

There are established bacteriological and chemical laboratories for their analyses that are absolutely perfect, so far as modern workmanship and experience in the needs of such things can make them so. Specially designed and manufactured apparatus and accessories for their work have been provided and installed until the claim of perfect equipment is made good to the last syllable.

The Sanitation Department of the People's Water Company is under the supervision of Professor Charles Gilman Hyde, the Sanitary Director.

The name of Professor Hyde stands for the highest achievement in the particular work this position requires. His reputation as one of the highest authorities in the country was established before he came to the University of California to occupy the position he does, as Professor of Sanitation and Hydraulic Engineering, in that institution.

From the time he left the Massachusetts Institute of Technology to this date his work and his success in his field are known among scientific men or those interested in the effectiveness of scientific methods on the protection of modern urban water supplies.

Professor Hyde is of the opinion that surface water can be made the perfect domestic use water with the best of filtering and sterilizing. His system of handling the water supply of Oakland to be installed is supplementary to what has been described, and will accomplish this purpose as it is not accomplished anywhere else in the country. In fact, but one or two of the most perfectly equipped water plants of the country are attempting to do so much in this direction.

Professor Hyde has made all of his laboratory experiments that are

necessary to secure perfect working results from his sterilizing treatment, and the chemical to be used, while instantaneous in its deadly effects on the objectionable organisms in the water, is applied in such minute quantities that no bad or even noticeable effects of any kind can come from it, so far as the human users of the water are concerned.

Hyde has apparently been working hard over the problem of water supply. Newspaper accounts have been received of his public lecture in favor of the filtration plant in connection with the Sacramento water supply to be taken from the Sacramento River. An excellent likeness of the lecturer is given.

1897.

JOHN A. COLLINS, JR., *Sec.*, 67 Thorndyke St., Lawrence, Mass.

Bradlee & Chatman (C. W. Bradlee, IX.) have moved their offices from Beverly Street, Boston, to the corner of Broad and Battery-march Streets, maintaining at the same time a warehouse and factory in Charlestown. The firm do a large business in heating and ventilating engineering, in addition to the handling of American Radiator Company's products.—At the sixty-second annual meeting of the Boston Society of Civil Engineers, held March 16, L. S. Cowles (I.), who is chairman of the building committee, presented a scheme for a \$1,500,000 building to be used as a club-house, society headquarters and office building by the professional engineering societies of Boston. It was proposed to locate the building on Boylston Street between Park and Copley Squares.—In a letter received from a '97 man, F. S. Hitchcock, a fine tribute is paid to Mrs. Richards and also to the benefits to be derived from Institute training. Referring to Mrs. Richards, he writes, "There could be no stronger argument in favor of home sanitation and the study of health and hygiene than your living example of health through the practice of them." Mr. Hitchcock is principal of the Manual Training and Industrial School of New London, and, in speaking of his years at the Institute, writes:—

The spirit of investigation, the accuracy and skill of all scientific work and, above all, the love of work was what Tech gave me. Because I could not graduate may have compelled me to accomplish more than I would have done, had my training with you been complete. To the Massachusetts Institute of Technology is due whatever success I have attained in teaching.

We wish that more of the men felt as Mr. Hitchcock does. It would mean much for Tech.—Charles L. Hammond (I.) has associated himself with the firm of Connors Brothers Company

of Lowell, Mass., in the capacity of engineer. This company make a specialty of public building construction, such as post-offices, court-houses, etc., also sea walls and breakwaters. Hammond has been in the government employ for ten years, the majority of that time as superintendent of construction of various buildings throughout the country.

1898.

PROF. C.-E. A. WINSLOW, *Sec.*, 157 Walnut Street, Brookline, Mass.

Leonard has been made vice-president and general sales manager of the Adamant Brick Company, Denver, Col. His address is 331 East 7th Avenue.—Allyn has recently been elected to serve as one of the governors of the Technology Club of New York.—Tallmadge and Watson are at work on a large stone church to be built in Evanston, Ill.—Cutter is now with the Studebaker Brothers Company of New York, Broadway and 7th Avenue, at 48th Street.—Muhlig is now with the Neidich Process Company at Burlington, N.J. So the good men get together.—Packard's present address is care of George K. Hooper, Room 2025, 165 Broadway, New York.—Gardner is now with the Blackman-Ross Advertising Agency of New York city.—There is now quite a list of '98 men with the Du Pont Powder Company, including Kendall, Page and Porter.—Colcord has moved his headquarters from Chrome, N.J., to 42 Boadway, New York, where he is now cashier for the United States Metals Refining Company.—Winslow has accepted an invitation to deliver a course of lectures on Municipal Sanitation at Teachers' College, Columbia, next winter.—Richardson has opened an office for general engineering work at 85 Water Street in partnership with Hale, '04.—Bishop has left Peoria to accept a professorship in physics at the University of Pittsburg.—Seidensticker is now with the Warren Sugar Refining Company at Edgewater, N.J.—Bergen has left San Francisco to become superintendent and business manager of the Sacramento Valley Power Company, Chico, Cal.—Perley is now with the Avery Chemical Company at 88 Broad Street, Boston.—Wadsworth is now acting as consulting engineer to the East Boston Company, with offices at 19 Congress Street.—Zimmermann is contracting manager for the Northern Michigan and Duluth districts of the American Bridge Company of New York, with headquarters at Columbia Building, Duluth.—Churchill's present address is Luxor Lodge, Point Loma, Cal.—S. K. Humphrey is at present on the Mediterranean, having sailed from Boston on Saturday, February 26. On Friday evening before his departure his friends at the Technology Club gave him a farewell dinner.—“Don” C. Campbell is back in “Yankee-

land" again, having just returned from Germany to assume charge of Duluth office of his old company, the Ingersol-Rand Company. Says he is glad indeed to be in America once more.—Coburn gave a talk on "Hydraulic Power Plants" before the undergraduate Civil Engineering Society last month. He reports business rushing, is now building four plants, one in Georgia, two in Minnesota, one in Wisconsin.—Mr. and Mrs. Fitch Gilbert, of Cambridge, entertained a large number of their friends Wednesday afternoon at a reception and tea given in honor of their daughter, Miss Gladys Gilbert, and to announce her engagement to Ralph Rumery, of Albany. Mr. Rumery is a graduate of Harvard University and of the Massachusetts Institute of Technology. The decorations in the Gilbert home were very simple, but attractive, being quantities of flowers that were sent to Miss Gilbert by her friends in honor of the occasion. The date for the wedding has not been decided.

1899.

HERVEY J. SKINNER, Sec., 93 Broad Street, Boston, Mass.

Stockton was elected president of the Old Colony Trust Company, Boston, after its consolidation with the City Trust Company. The *Boston News Bureau* says:—

The Old Colony Trust Company people have a high appreciation of the well-merited success which has rewarded the energy and ability of President Philip Stockton who has built up the business of the City Trust Company by leaps and bounds, and he will be the unanimous choice for the presidency of the new Old Colony Trust Company.

Mr. Stockton is not old in years, but he is a veritable genius in his particular line of activity. He will be surrounded in various executive positions with all the men who have contributed to the success of the Old Colony Trust Company.

—Witherell was married February 15 to Miss Alice M. Grover, of Lynn, Mass. They will make their home at 24 Idlewild Street, Allston, Mass.—Phelps read a paper on "The Disinfection of Water and Sewage Effluents" at a recent meeting of the Boston Society of Civil Engineers. Phelps has had an exceptional experience on sewage disinfection, having carried on extensive experiments at the Sewage Disposal Works at Red Bank, N.J., and at the Walbrook Testing Station in Baltimore, in addition to his work at the Sewage Experiment Station at the Institute.—Sherrill spent the recent vacation in Florida in company with Dr. Noyes.—Corse was in Boston in December, attending the American Chemical Society.—Loomis is assistant engineer with the Packard Motor Car Company, Detroit, Mich.—Hinckley is engineer of tests for the New York, New Haven & Hartford

Railroad Company.—The following changes of address have been received: Harold O. Ayer, Castle Hot Springs Hotel, Hot Springs, Ariz.—H. H. Adams, care of Toronto, Hamilton & Buffalo Railway, Hamilton, Ont.—Miss Alice M. Burr, 15 Vine Street, Melrose, Mass.—H. M. Cushing, care of General Electric Company, Ellicott Square, Buffalo, N.Y.—Harry C. Damon, care of Simpson Brothers, 166 Devonshire Street, Boston, Mass.—J. B. Ferguson, Hagerstown, Md.—A. W. Grosvenor, Fort Wayne, Ind.—H. G. Johnson, Boston Woven Hose & Rubber Company, Cambridge, Mass.—L. A. Newell, 2205 Endora Street, Denver, Col.—W. R. Parker, 77 Beech Avenue, Melrose, Mass.—George A. Pennock, care of Western Electric Company, Hawthorne, Ill.—Clarence Renshaw, 117 Linden Avenue, Edgewood Park, Pa.—E. W. Sibley, 221 High Street, Boston, Mass.—Gerald B. Street, 923 Dupont Building, Wilmington, Del.—Herbert Vanderhoof, 1502 Marquette Building, Chicago, Ill.—R. M. Vining, 12 Bridge Street, Danvers, Mass.—J. A. Walls, McCall Ferry Power Company, McCall Ferry, Pa.—W. L. Wood, Jr., 116 East Broad Street, Texarkana, Ark.

1900.

INGERSOLL BOWDITCH.

GEORGE C. GIBBS.

RICHARD WASTCOAT.

PERCY R. ZIEGLER.

N. J. NEALL, *Sec.*, 12 Pearl Street, Boston, Mass.

We have received a letter from Dutton stating that he is still living in Lebanon, and has been made manager of the furnaces of the Pennsylvania Steel Company located at that place. In closing, he referred to an item of news appearing in a previous issue of the REVIEW to the effect that Ziegler was interested in a cow-milking machine. He said, "With the experience you have had in extracting the secretion from the worthy cow, you certainly ought to be able to collect a lot of information from the brain matter of the average man of our class." In quest of class news Ziegler wrote a month ago to twenty-five men in the class, asking for information, and was successful in hearing, to date, from three of them. If what Dutton states is true, regarding Ziegler's ability for extracting things, either the twenty-five men written to were not average men or, to carry Dutton's simile further, like the cow, their brain had gone "dry." It is still the hope of the committee that this is not a permanent condition, but that they also will "freshen" and "let down."—We have recently heard that Carleton Ellis has built a fine house in Montclair, N.J., where he is now living. When we consider that Ellis now has three children, over two hundred patents in the Patent Office, is president of the Ellis-Foster Company of New York, which specializes in the field of industrial chemistry, and is an officer and director in a number of other companies operating

under Ellis's patents, it is apparent that he has been hustling since leaving Technology. In fact, to read a list of his accomplishments during the last ten years is to remind one of the account given in the Book of Genesis of Jacob's belongings,—so many thousand goats, camels, horsemen, wives, etc.—Vogel is still with the Lackawanna Steel Company, and dropped in to see a number of the Boston fellows on his annual trip this February.—Suter writes that he is now living in New York, and is assistant designing engineer of the Board of Water Supply of New York city, has charge of a small squad of engineers “who work at the details of things, while I try to worry the English language into some sort of shape that will not mean just the opposite to what I intended it to. My work has been mostly on the syphon tunnels, long tunnels below the valleys frequently below the sea level, through which the water is to flow under pressure. This was somewhat of a new venture in aqueduct work, at least they put it over previous records for depth and pressures, and it has been interesting work.” He stated that the Water Supply Board “is engaged in getting water from the Catskill Mountains to the bath-tubs of New York, some 500,000,000 of gallons per day.” Judging from a ride which we recently took in New York on the Third Avenue Elevated, we should say that some of these gallons of water had not reached all of the bath-tubs.—We have the announcement of Harry Harp's marriage to Irma Chase Shepard on the 29th of January. They will live in Brooklyn.—We notice in the *Engineering News* that Clinton D. Thurber has been transferred to the naval station of the Great Lakes at Chicago as assistant to the civil engineer.—Many of us will remember Webster Wickes, who distinguished our class at the time of the large Republican torchlight procession in the fall of 1896. He is now living at Los Angeles, and is engaged as an expert mining engineer.—Harry Thayer writes that he is now superintendent and resident manager of the large works of the Proctor & Gamble Company of Kansas City. They are turning out over 3,500 boxes of soap every day, and the plant is growing continually.—Between Suter and Thayer it would seem as if the bath-tubs of New York ought to be well supplied. On writing him, we expressed our regret that he had not been able to improve the quality of Ivory soap, as advertised, but he writes that “it keeps me pretty busy to maintain the 99.44 per cent. pure. Of course, we all aim at perfection; but, when we all get as near it as Ivory soap is, the millennium will be here, and, when we answer the last roll-call, we will be assigned to a place in the choir instead of being handed a coal shovel.” From what Thayer says about Ivory soap we feel there is no question but what he is right when he says that he liked the administrative and advertising end of the business better than the laboratory. He has a special message for the class, and we quote below what he says:—

Sure, I am married. That is about the first thing I did after I left Tech, and I have two future Tech students, too. I am with Teddy Roosevelt on this family business idea, as well as in politics. There is nothing to the poodle-dog business. The dog goes all right *with* the children, but tell the boys for me that, if they have the dog alone, they are missing half the fun."

—Ziegler must agree with Thayer's sentiments, for we notice that he recently announced the birth of a son, Kenneth Hale Ziegler, last December.—Leonard has announced his marriage to Miss Flowerree Grey on the 27th of last December. After their marriage they spent two or three months in Europe, returning this month. Leonard writes that the business of the Leonard Construction Company, which does a general contracting business, is very good indeed, and is getting better every year.—The fellows will be sorry to learn of the recent death of Fitch's little daughter Barbara. Fitch himself is now in New York, engaged on some accounting work.—It will be recalled that Harold Conant continued his studies in the New Church Theological School at Cambridge after leaving Tech, and for some time has been assistant to the pastor of one of the largest Protestant churches in America, the First New Jerusalem Society of Philadelphia. We now notice that he has just been called to the pastorate of the new Jerusalem Swedenborgian Church in Philadelphia.—Like some of the other members of the class, Sperry writes that the fact that he has not had a chance to attend any of the reunions does not indicate that he has lost interest or touch with Institute affairs. After a three months' bicycle trip abroad immediately after he left Tech, he went to work at the large machine shop of William Sellers & Co., of Philadelphia. In the spring of 1902 he entered the service of the Stone & Webster Company, and has been serving in different capacities ever since, first in Savannah, then in Ponce, as manager of the Ponce Railway & Light Company, then superintendent of the Minneapolis General Electric Company and now he is in Savannah as manager of the Savannah Electric Company. In writing, he said that he was not married, and considered himself now immune.—The men will all be sorry to hear of the death of Walter A. Moulton. A telegram was received just as our class letter was going to press from the Liberty Bell Mining Company of Telluride, Col., stating very briefly that he had died suddenly of bronchial pneumonia.—March 16 twenty of the class gathered for an informal dinner at the Technology Club. After the dinner, Charles, who has been working on the dam which was built across the Charles River as part of the Charles River Basin Improvements, gave us a talk on his work and illustrated it with lantern slides, showing the dam at different periods of construction. It is practically complete now. We are looking forward to another one of these dinners the latter part of April, when we expect C. A. Richardson will give us an

interesting talk about things he has seen in our north-west. We hope that we may be able to report some more news from some of the twenty-five fellows referred to above. Perhaps they need two or three more months to answer letters.

1901.

ROBERT L. WILLIAMS, *Sec.*, 19 Pleasant Street, Cambridge, Mass.

Ellis F. Lawrence, formerly of MacNaughton, Raymond & Lawrence, architects and engineers, may be found at 613-615 Lewis Building, Portland, Ore., where he will continue the practice of architecture. He will also maintain an office in the Ransom Building, Walla Walla, Wash.—John M. Perkins has recently finished his work as foreman of the Lowell Machine Shop Foundry, and accepted the position of foundry superintendent for the Detroit Stoker and Foundry Company. Among the castings which will be made under his supervision will be those for the Chalmers-Detroit automobiles. Upon leaving, he was presented a purse containing \$180 in gold by his workmen as a token of their esteem for him.—Matthew C. Brush writes he is general manager of the Buffalo & Lake Erie Traction Company, Buffalo & Lackawanna Traction Company, Jamestown, Chautauqua & Lake Erie Railroad Company and Chautauqua Steamboat Company. He has complete charge of the operation of the above companies, covering approximately two hundred miles of electric railway, forty odd miles of steam railway and eleven steamboats. With all his activities Brush has not got married yet. The class thinks he had better take a day off.—In an interesting letter to the secretary Solon J. Stone writes:—

I became connected with the McLean Contracting Company in April of 1909, being placed in charge of the construction of a timber and pile trestle across the Albemarle Sound, North Carolina, a contract which we had from the Norfolk & Southern Railroad. This trestle, the construction of which seemed a gamble in railroad circles, was to cross a stretch of navigable waters of a rather turbulent nature, five miles long, and, though we were bothered, now and then, by the winds carrying away pile-driving machines from the top of the trestle or sending floating plant on a pleasure trip down the sound, etc., we really had a minimum of trouble during the construction of it, and trains have been running across it for the past month very successfully. In July the company decided that they wanted me to take charge of their Norfolk office, from which I have been managing the work of construction in the territory south of Norfolk, including the above-mentioned trestle and a sea wall for the city of Charleston, S.C.

—The secretary would be pleased to receive letters from others, telling what work they are putting through, so that he can give

the rest of the class an idea what the fellows are doing.—The following changes in address have recently been received: Arthur P. Merrill, 220 Provident Building, Tacoma, Wash.—Charles E. Martin, American Bridge Company, Edgemoor, Del.—Carl F. Johnson, 123 East 27th Street, New York City, N.Y.—Mortimer B. Foster, Sound Beach, Conn.—Carleton Warren, Riter Conley Manufacturing Company, Pittsburg, Pa.

1902.

F. H. HUNTER, *Sec.*, 75 Park Street, West Roxbury.

Since the last issue of the REVIEW the annual Class Letter has been sent out, with report of the secretary-treasurer and other matter. A great many replies have come in, with so much news that some must be held over for a future issue of the REVIEW. A good many classmates sighted the notices regarding dues, and the returns so far have been enough to wipe out the deficit in the report and pay the cost of printing and postage for the Class Letter. Beyond that, however, the balance is small, but, if those who have not yet responded to the "touch," will come up when they read this, the condition of our treasury will be more healthy. There has been but one class gathering since New Year's,—a bowling party in Boston. Many of the fellows precluded the bowling by a dinner at the Rathskeller, which may explain why the class records made last year were not boosted during the evening. The objective of the affair was fun rather than high records. The honors lay with Mahar and Wood for best averages. Those present were Nickerson, Wood, Strand, Sawyer, Bourneuf, Butler, Borden, Hunter, Mahar, Moore, Ritchie, Stillings, Robinson, Millar and Ames. At the Alumni Association banquet at the Somerset on January 19 the class was represented by Everett, Mardick, Manley, Robinson, Whittet and Hunter. A toast was drunk, "To our absent classmates, may they always fare as well!" (If they do, they will live high, for it was one good feed.) At suitable time the old class cheer was raised. At the North-western Association banquet in Chicago Lockett and Pendergast held up the honor of the class. Also during a brief visit of Brainerd to the Windy City he was entertained by Lockett and Currey at an informal '02 dinner.—Our class president, "Doc" Williams, made good use of the mid-year recess at the Institute by getting married. Mrs. Williams was before the event Miss Bertha M. Downes, of Francetown, N.H. They are at home, and glad to see old friends at the Lockmore, Magazine and Tufts Streets, Cambridge, Mass.—Pendergast, whom we reported in the last REVIEW as travelling in Europe, was called home by the sudden death

of his father. For the present his mail address is Northwood, N.H.—Pember has come north from Bristol, Va., to take a position in Albany, N.Y., as chief draughtsman for the Fuller & Robinson Company, architects. The class secretary recently had the honor to stand godfather at the christening of Edward Hewett Pember, who was born on Dec. 16, 1909.—Manley has completed the construction work that took him to the Adirondacks about a year ago,—several buildings, including a power plant, for the Stonywood Sanatorium,—and is now engaged in engineering work in Boston. His address is 116 Mount Vernon Street, West Roxbury, Mass.—Hall is treasurer of the American No-Slip Cement Company of 60 State Street, Boston.—Saylor has left the staff of *Country Life in America*, and is now editor of *House and Garden*, a monthly magazine, whose end and aim is well set forth in its title. His office address is care McBride, Winston & Co., publishers, 449 Fourth Avenue, New York city.—Pearson is settled over Christ Church, Ridgewood, N.J. His charge also includes St. Bartholomew's chapel in the neighboring village of Hohokus. He was married last October to Miss Emma T. Scanlon.—Shedd reports his permanent address as Sagamore Avenue, Portsmouth, N.H. He is now with Purdy & Henderson, laying out the structural steel for the new municipal building for New York city. Recently he laid out both steel and concrete work for the new buildings soon to be erected for the Ariocho Wentworth Institute in Boston.—Hollis, who is superintendent for the Eastern Talc Company of Granville, Vt., reports that business is always "smooth" when you are getting out talcum powder.—Archie Gardner's address is reported as R. F. D. No. 1, Athens, Ga.—Harold L. Pope is with the Mathewson Motor Car Company at Wilkes-Barre, Pa.—Milliken's address is 50 Pine Street, New York City.—Warren Taylor is with the Trussed Concrete Steel Company at their Detroit office.—Vietor is on the staff of the *Inland Daily Herald*, Spokane, Wash. He has been engaged in newspaper work in Oregon and Washington since last reported in the Class Record Book. His address is 1614 West Riverside Avenue, Spokane, Wash.—Wright reports his address as 227 3d Street, Aspinwall, Pa.—W. V. Morse is east from Colorado on a vacation. His present address is 53 Summer Street, Gloucester, Mass.—Edwards writes from Portland, Ore., as follows:—

For the last year I have been mostly in the west, having completed engineering work on a large lime manufacturing plant in Texas during 1909, enabling me to be home in Boston for Christmas. I left Boston on February 22 for this city, which place I reached today, having been fortunate in escaping many floods and washouts on the way. At the present time I am in charge of all cement inspection and concrete work for the Portland Railway Light and Power Company on their two large power developments on the Clackannus River about forty miles

above Portland. On this work will be used three hundred thousand barrels of cement in the building of two dams, with power plants which will develop about eighty thousand horse-power and run all the cars for forty miles around Portland.

On my stay in Salt Lake I visited the Utah Consolidated Copper Plant as well as the Boston Consolidated, also going over the American Smelting and Refining Smelter, which is the second largest in the United States. Fleming, '01, is in charge, and showed me over the works. Cates is also there with the Consolidated. Salt Lake is a fine young city, growing rapidly and with much wealth. [Why wouldn't it with so many good '02 men there?]

—Pete Currey has opened an office for general engineering work in electrical and mechanical lines at 108 La Salle Street, Chicago. The best wishes of his classmates will certainly be with "Currey & Co."—James C. Howe is vice-president of the American Trust Company, 50 State Street, Boston.—Green reports that his work at Houston, Tex., for Mauran & Russell of St. Louis, is completed, and he expects to be in Boston soon.—Ames reports that his business address is care Standard Thermometer Company, 65 Shirley Street, Boston. This concern has taken over the business of the Parker Manufacturing Company and Ames with it. His residence is 150 Harvard Street, Dorchester, Mass.—Bonnemort has been promoted to be assistant division engineer of the Boston & Albany Railroad, being located on the Boston end of the line.—Mathesius reports his marriage on June 24, 1908, to Miss Irma Fischer, of New York, and on May 20, 1909, the birth of a daughter Eleanor. He reports that he is now well established, with a growing practice in architecture. His office is 103 Park Avenue, New York city.—Lind reports from the University of Michigan that he has leave of absence for the next year, and will spend most of his time studying in Paris.—Z. M. Briggs is now in the Philadelphia offices of the General Electric Company in the Witherspoon Building.—Belcher is now in Havana, his address being Hotel Plaza.—Howard C. Fish died on March 13, 1910.

1903.

F. A. OLMSTED, *Sec.*, 93 Broad Street, Boston, Mass.

Comer has recently become associated with Henry E. Dix, stationer, at 220 Devonshire Street, Boston, where he is glad to take orders for everything in the way of stationery, printing, engraving, lithographing and blank-book manufacturing.—Drury has been appointed manager of the mining department, Northern Division, Mexico, for the Guggenheim Exploration Company. His address now is Minas Tecolotes, Santa Barbara, Chihuahua, Mexico.—McIntosh has accepted the position of treasurer of

the Pierce Motor Company, with headquarters at Racine, Wis.—Crosby writes from New York, March 6, as follows:—

Shall write a few lines to let you know that '03's New York contingent is not altogether dead. There are about forty-five of us in and about this little suburb of Boston, and they all seem to be doing a hustling business. On Friday, March 4, eleven of us repaired to the Technology Club for dinner, and, if those who did not come around had known what a good time we had, they would have been sorry indeed to have missed the opportunity of seeing their classmates. The following were present: Babcock, Bradshaw, Crosby, Endres, Greene, Howes, Joseph, Kershaw, Scofield, Scudder and Taylor. After a dinner of which the club cook might be proud, we adjourned to the lounging-room, where Taylor discoursed on the most helpful of his studies at the Institute; Babcock told hair-raising stories of tunnel construction; Kershaw entertained us with a description of the oxy-acetylene blowpipe and the physical properties of liquid air, and Bradshaw explained all we wished to know of the rubber business except the secret (which keeps him looking so sleek and well-fed) of how to make first-class rubber with .01 per cent. of pure gum. All hands expressed delight when they heard they could expect to see the Class Book soon.

—The much delayed Class Book which Crosby refers to is now in the printer's hands, and should appear shortly.—Mitchell returned to Bahia, Brazil, after his trip north last summer, and is again with the Bahia Tramway Light and Power Company, Caixa 4, Bahia, Brazil.—The following new addresses are noted: H. S. Baker, 1727 Chase Avenue, Chicago, Ill.—W. J. Bay, 525 Rookery Building, Chicago, Ill.—Miss Blood, 37 Howe Street, New Haven, Conn.—C. A. Bryan, Lynbrook, Long Island, N.Y.—W. R. Davis, Neville Street and Centre Avenue, Pittsburg, Pa.—S. A. Foster, Willie Street, Lowell, Mass.—G. H. Garcelon, 718 North Avenue, Wilksburg, Pa.—J. E. Harlow, Jacob Tome Institute, Port Deposit, Md.—L. H. Hunter, 1165 E. 61st Street, Chicago, Ill.—J. L. Jones, 171 La Salle Street, Chicago, Ill.—L. R. Kaufman, 110 E. 23d Street, New York.—Professor H. B. Litchman, University of Alabama, University, Ala.—P. D. Lothrop, Johannesburg, Transvaal, So. Africa.—Harry R. Low, American Zinc Ore Separating Plant, Platteville, Wis.—H. C. Merrill, 7 Andover Street, Peabody, Mass.—H. M. Morley, Tufts College, Mass.—H. S. Morse, 538 Baxter Avenue, Louisville, Ky.—J. W. Regan, 51 Waltham Street, Lexington, Mass.—W. C. Rott, 1217 Bessemer Building, Pittsburg, Pa.—Duncan Wemyss, 316 Broadway, New York.—R. B. Yerxa, Miami Copper Company, Miami, Gila County, Ariz.—E. D. Forbes, Box 65, Brant Rock, Mass.—R. F. Manahan, Goldfield, Nev.

1905.

GROSVENOR D'W. MARCY, *Sec.*, 246 Summer Street, Boston, Mass.

On February 8 Ray H. White and Miss Frances French were married in Rochester, N.Y.—Leonard W. Cronkhite reports the birth of a daughter, Elizabeth, on February 12.—Ros Davis announces his engagement to Miss Helena Stone, of New York city, and Alden Merrill writes on the same day to tell of his engagement to Miss Emeline Cook, of Torrington, Conn.—Edwin Bruce Hill and Miss Agnes Flora Dempster are to be married on April 14 at Pittsburg. They will be at home after September 1 at 5424 Avondale Street, Pittsburg.—Harrie Whitney's family circle has been enlarged by the arrival of a nine-pound girl, Miss Eleanor Thayer Whitney. Whitney's private work and his work as Beverly's city engineer combine to keep him busy. He writes that the sewage disposal problem which has been under discussion for a long time has been turned over to him to report on. This means looking into several methods of land treatment as well as a deep-sea outfall, making designs, estimates and recommendations.—Pret Smith writes as follows:—

My one great piece of news is the birth of a daughter, Jeanne Morris-Smith. Had a call at the tannery from Sam Worcester the other day,—asked me if I was a Tech man. Said yes, my name was Smith. "Oh, yes," he said, "used to be a fellow, P. M. Smith, in my class." "I'm it," says I. No wonder a dormitory system is wanted.

PRESTON MORRIS-SMITH.

—George Fuller has returned to Boston, and intends to finish his course at the 'Stute and get his degree. He is living at 43 St. Botolph Street.—E. B. Cooper has left Stone & Webster, and is now with the Gabriel Concrete Reinforcement Company in Detroit.—Lloyd T. Buell writes:—

Have been at Ray, Ariz., with Ray Central Copper Company for seven months. Have just moved to Ajo, which is forty-three miles from the railroad at Gila Bend. I am prospecting the ground for New Cornelia Copper Company. Played tennis Christmas Day. Please change my address to Gila Bend, Ariz.

—The secretary wrote to Fred Whitmarsh's family to learn the particulars of his death and to express the sympathy of the class. He died on the 9th of last July, at the Garfield Hospital, Washington, D.C., of cerebral meningitis, after an illness of six days.—Charles W. Hawkes has left the position of mechanical engineer with Howard & Bullough American Machine Company of Pawtucket, R.I., to be manager of the department of Textile Mill Construction and Power with the *American Wool and Cotton*

Reporter, 530 Atlantic Avenue, Boston. Several articles written by him have appeared in this journal, and he will now devote his time to working out problems in connection with his department in the textile centres in New England.—Herbert M. Wilcox has left the Skyland Hosiery Company, Tryon, N.J., and is now with Walter B. Snow, the publicity engineer, at 79 Summer Street, Boston. Any '05 man who is struck by the fewness of these news items will help the secretary if he will sit right down and think of any items he knows of, and send them in.

1906.

FRANK A. BENHAM, *Sec.*, 170 Summer Street, Boston, Mass.

RAY J. BARBER, *Asst. Sec.*, Los Angeles, Cal.

A class dinner was held at Louis' Cafe February 16 at 6.30 o'clock. Considering the inclemency of the weather, there was a very good attendance. We felt highly honored that all three of our invited guests could be present. President Maclaurin spoke of the need of a larger endowment and larger bequest to the Institute, also the need of proper legislative action to remove the restrictions upon the land where the Rogers and Walker Buildings now stand. Bursar Rand spoke of innovations at the Institute the past year. He says that the new Union financially is not a success. Dr. Warren, whom many of us met for the first time that night, gave us some interesting remarks on "expert testimony." He cited examples which illustrated how ridiculous it is sometimes. The following fellows attended: R. J. Barber, A. B. Sherman, R. S. Clark, Ginsburg, George Fuller, Wight, Burr, G. S. Young, R. W. Rose, Foley, Tucker, Sadtler, Hobson, Patch, Benham.—A letter from Bartlett says that he and Ranney have formed a partnership under the name of Bartlett & Ranney, civil and structural engineers. They are located in San Antonio, Tex. Bart says that business is good.—Carroll Farwell is in Montana, assistant engineer with the Reclamation Service. He is expected back here in the east for a while.—"Scotch" Honeyman is in Portland, Ore., now.—Van Hook is in Louisville, Ky. Van says he likes the country as well as Boston.—Bill Mathison writes that he would like to see God's country again. He is in Gouverneur, N.Y., which, he says, is a snowy spot, nothing else, ten miles from electric lights and thirty-five miles from trolley cars.—George Davenport sends greetings from sunny California. His address is 1107 West Vernon Avenue, Los Angeles.—John Root writes from Wardner, Ida.:—

Am in a Tech Club of my own here, the only one left since L. R. Davis ('07) and A. T. Heywood ('06) hit the trail. Occasionally I meet Ed Griffin ('06) on the train between here and Spokane, and hear from

some of the boys in the more remote (?) regions "back East." The place is a typical mining camp, but has scores of college men working for the big companies.

He is working for the Federal Mining and Smelting Company.—McKay is in Steelton, Pa.—Max Coe says he expects to be in Boston in June.—Charlie Richardson writes from Pepperell, Mass.:—

I was married June 1, 1909, to Miss Mary G. Stone of Mattapan, in the Church of the Disciples, Boston, as scheduled. Unfortunately, I broke down unexpectedly in August from consumption, and had to resign my position with the Associated Factory Mutual Fire Insurance Company in Boston. After staying two months in a sanatorium, I came to Pepperell, and am making great progress regaining my health. Has it ever appeared in the REVIEW that C. W. Mowry, of the above company, became the proud father of a boy last year?

—L. A. Thompson became the father of a bouncing baby boy, Cedric, Aug. 8, 1909. Tommy is working in Boston for D. C. & W. B. Jackson.—Hallowell is now married. Just at present he is with the Temiskaming Mines Company, Cobalt, Ont.—Mears is now in Bisbee, Ariz.—Martin Hayward is with Spurr & Cox, located somewhere in Mexico. He is doing some geological work.—Bill Sheldon is in Boston for a visit of a few weeks, after which he will return to the job in Colorado.—Guy Ruggles, who has been east for a short visit, and has returned to Santa Rita, N.M., has not been heard from since.—Fay Libby is still with the Vulture Mining Company in Arizona. Wallace Hall is with the Columbus Manufacturing Company in Columbus, Ga.—Wee Williams writes:—

I left South Dakota, where I have been for the past two years, on the first of November, and started for Mexico, nothing more definite in view. Spent a month in getting here, part of the time in Denver and the rest in Nevada, where I ran into Billy Neilson, who treated me royally. Was down in Velendina at Thanksgiving time, where I spent a couple of days with the Tech crowd. Now I am buried in a God-forsaken little mining camp in Northern Sonora, thirty-five miles from a railroad, but with mail connections now and then. I'm metallurgist for the El Tigre Mining Company.

—E. B. Pollister is with the Robinson (Ill.) Water, Light and Heat Company. He says he will give any Tech man a rousing welcome, should he happen to be in Robinson.—C. B. Morey writes:—

If any '06 men come to Buffalo, I shall be glad to meet them and introduce them to the Tech Club of Buffalo. This club is chucked full of life and vigor and enthusiasm for M. I. T. We have a big dinner on the second Wednesday of every month. Every Tuesday we meet for luncheon at the Teck Cafe on Main Street.

—Hinckley writes from Altoona, Pa.:—

Elliot is living with his wife at Wenatchee, Wash., where he has a fine berth with the electrical people. Waldo is, or was, at last accounts, ranching near the Rio Grande in south-eastern Texas. Chase is chief chemist at the Reading (Pa.) sewage disposal works. I have been knocking around, trying to find a soft spot, and have not succeeded. Spent the last year in three places (Hink always was a wonder), Columbus, Ohio, St. Paul, Minn., and Altoona, Pa. Am consoling myself that I am getting experience, but it don't seem to be worth much.

—Joe McKernan and L. A. Oldershaw (Yale) are to open an office at 33 and 34 Booth Block, New Britain, Conn., on April 1. They will engage in a practice of general engineering.—We were deeply grieved to hear of the death of William H. Lincoln. The following extract is taken from a letter written by Mr. D. W. Cole, constructing engineer, with whom Mr. Lincoln was working at that time in the construction of the Shoshone dam, Cody, Wyo.:—

We were building a small wall for a guard rail along the road. We had congratulated ourselves that what might have been considered the dangerous work was completed, but, sad to state, in the minor work of completing the details the mishap occurred. He was giving the men under his direction some assistance in moving a stone out of the way, and in some manner, not fully explained, lost his footing and slipped off the edge of the cliff, falling about thirty-four feet vertically into a rocky channel below. He was stunned to insensibility by the fall. Every assistance was rendered that expert skill could suggest, but to no avail. A little before eight in the evening he took a sudden turn for the worse. We all did our best to save his life, but evidently the terrible shock had caused internal injuries that could not be remedied.

—We were greatly shocked last December to hear of the sudden death of our classmate, William H. P. Wright. He had been obliged to leave school at the middle of his senior year on account of tuberculosis, and for the past year he had been on a ranch in Colorado to regain his health. He was getting along well, and would, no doubt, have recovered entirely in time. But, in getting out of a carriage, while on a day's pleasure shooting, he accidentally shot himself in the arm. He went to a doctor and had the bullet extracted, the wound dressed, and thought little more of it. In a few days, however, he became suddenly ill, and died of lockjaw within two days. His body was brought back east by his parents, and is buried in his home town of Lawrence, Mass.—Resolutions were passed by committees of the class on the death of Lincoln and Wright, and a letter was received from the parents of the latter thanking the class for its kind expression of sympathy.

1907.

BRYANT NICHOLS, *Sec.*, 143 Garland Street, Everett, Mass.
 W. W. BIGELOW, *Res. Sec.*, 399 Lexington Street, Waltham, Mass.

I. *On the Part of the Secretaries.*

The secretaries are still writing many letters and receiving comparatively few replies. We are also occasionally receiving checks for \$1 for class dues. We like to receive these two particular articles very much, for, although we are very glad to give just as much time and effort as possible to '07, we do not like to have "all going out and nothing coming in." We shall welcome all kinds of news, both financial and literary, from all '07 men. Before the next issue of the REVIEW is published, June will have come, and '07 will have had some kind of a reunion. We have not decided just what it will be as yet, but all members of the class will receive an announcement some time during April probably, and we give you fair warning that all '07-ites who *can* get to Boston, and who fail to do so, will have a black mark put against their names in the secretary's roll. Something will be doing! You want to do something! Ballots for class officers for 1910-11 will be sent out also in April. The class constitution says that the "election will take place on the third Monday in May," which is May 16 this year. Don't fail to send in your ballot, and thus exercise your right to influence the policy of the class. Some kind of a reply sheet will be sent also, asking for some information. Please give what is asked for, and return the sheet with your ballot. If every man does his small part in these things, the larger work of the secretaries will be made light. Remember the Third Law of Motion. Act now, and there will be an equal reaction. In proportion as you contribute to the class, you will receive, in interesting REVIEW notes, efficient organization, and satisfaction in the knowledge that your class is at the top in Technology loyalty and interest.

II. *Letters.*

Under date of January 4, J. P. Chadwick writes:—

Since I left Tech, I have been with the Tennessee Copper Company continuously, having put in about two years in the smelter proper and nine months in the assay office. We had one celebration here last August that reminded me of old times in Boston. It was a Tech-Cornell-Vanderbilt banquet, at which there were eleven present, Tech being represented by Arnold ('04), Wey ('06), and myself. The fact that time in the camp is still reckoned from this occasion indicates the glorious success of the dinner, and it is with pride that I state that, thanks to our early training at "Charlie's," of the six survivors when the affair broke up at 3 A.M. we three Tech men were in at the finish.

Copperhill, Tenn., is Chadwick's address.—Henry M. Lewis, Jr., writes from 122 E. S. Semple, Salt Lake City, Utah:—

Since leaving the Institute in February, 1906, I entered the Pennsylvania State College, and graduated there in '07 in mines and metallurgy with the degree of B.S. In the fall of '07 I went to Boston to be private assistant of Professor Richards. The fall of '08 found me in Hartshorne, Okla., as chemist for the Rock Island Coal Mining Company. In the early spring of 1909 I came to Utah, and was in the employ of the Utah Copper Company, and during the summer became assayer for the Utah Leasing Company at Bingham, Utah. . . . Unfortunately (?), I am still single.

—La Noria Development Company, Sombrerete, Zoc, Mexico, is the address of A. O. Christensen. He writes:—

Tech spirit is wanting company around here. There are three Americans in town. Twelve miles away, at Sombrerete there are four white people. There are no others nearer than Zocatecas, some one hundred and fifty miles away. My job is superintendent of this mine, the La Noria Development Company. The job is all right, but no knowing how long it will last. If we can get ahead enough, this has the possibilities of being one of the big mines of Mexico. We have the ore and plenty of it, but the railroad is seventy miles away.

—R. F. Gale, 2103 Tioga Street, Philadelphia, accounts for himself thus:—

Since leaving Tech, I was with Stone & Webster, Acme Engineering and Contracting Company, D. C. & W. B. Jackson, and finally the Midvale Steel Company, where I am at present in the engineering department. I like my work very much, and find the manufacture of steel most interesting and instructive.

—Frank MacGregor's name appears on the letterhead of the Huff Electrostatic Separator Company as "Metallurgist." Frank wrote on January 12 from The Woodruff, Salt Lake City, Utah, at which time he was associated with the United States Smelting, Mining and Refining Company. He had an article in the December (1909) number of the *Mining World*, and the following is taken from the Salt Lake City *Telegram*:—

The meeting of the Utah Society of Engineers was held last night. . . . During the session two papers were read, one by F. S. MacGregor, metallurgist of the Huff Electrostatic Separator Company. . . . The Huff process, as set forth in the paper by Mr. MacGregor, was especially interesting, as the methods employed in this form of separation are quite new, there being but two of these plants in operation at present. One of these is at Midvale, Utah, where it is used in separating the zinc values from the lead and iron ores. The method of separation in brief, as explained by Mr. MacGregor, consists in allowing a feed of concentrates containing the mixed ores of lead, iron and zinc to fall through the elec-

tric field induced by two electrostatic electrodes having a potential difference of twenty thousand volts. The particles of ore which are good conductors—that is, the iron and lead—are drawn away from the original path of flow, and are cut off from the zinc, thereby enabling the large amount of zinc, which was formerly lost, to be saved. The iron and lead are smelted in the Utah smelters, while the zinc concentrates are shipped to Kansas to the American Zinc Refining Company. Each of the Huff machines used in the United States Smelting Mill at Midvale has from six to eight of the electrodes, and the whole mill, which has a capacity of about forty tons a day, uses only 29 H.P. The products from the Huff machine, as run in the mill just cited, range from 50 to 53 per cent. zinc and 3 per cent. iron in the zinc ores, and about 30 per cent. iron and from 9 to 10 per cent. zinc in the iron ores.

—F. A. Naramore writes from 812 Marshall Street, Portland, Ore.:

Out here in this Golden West, the land of opportunity for young men, I run across Tech men every now and then. They all seem to be prosperous, and are doing a great deal to sustain the already good standing that Tech has in these parts. I am architectural engineer with the Northwest Bridge Works of Portland. B. R. Honeyman, '06, is chief engineer, and I am under him. There are a number of Tech architects here, and they are doing the best work in the city.

—Professor C. D. Howe writes of good times in his career. He says:—

I returned yesterday, January 31, from a two weeks' trip to Montreal and Quebec for my holiday. Had a great time, and saw about all there is to see there. I had a little work to do at McGill College in Montreal, which furnished an excuse for the trip. I went tobogganning on Mt. Royal, skating in the rinks, took in hockey games and did the town in general. . . . I am working away at the same old game, and like it very much. I am not working so hard this year as last, as I have fewer courses to give, and I am having a pretty good time.

—J. G. Moore is at United States Naval Station, Key West, Fla., and writes:—

I am still down here acting as draughtsman and inspector on building work at the naval station. Am learning a lot and earning a fair amount.

—Clif Draper has made another move since the January REVIEW. He is now at 1736 G Street, N.W., Washington, D.C. He writes:—

This time I am assistant chemist of the Department of Agriculture in the Office of Public Roads. It is my desire to become a highway engineer, or at least do more engineering than chemistry in the construction of roads. . . . I saw Merton Sage the other day. He is studying law in a patent office, and is working hard.

—W. D. Milne keeps us posted thus:—

This is to tell you that I am within flying distance of Boston again, and that I would be glad to know of any '07 man located in this corner of New England. I am with Lockwood Greene & Co., of Boston, engineers for industrial plants, and have recently come north after a campaign in South Carolina and one in Georgia.

His address is Box 237, New Britain, Conn.—W. F. Turnbull writes from 510 West 124th Street, New York, as follows:—

I am now with the American Locomotive Company in the estimating department. I met there a Michigan man named Wagner, who has met both Rambo and Thayer in '07. When I was at Hampton Institute, Va., I had an opportunity to make some boiler tests, and spent some time explaining to one of the negro firemen, a young fellow brighter than the rest, the operation of a throttling calorimeter. After we had talked it over for several days, I asked him if he really understood it. "Yes, sah, I understand it pretty plain, but, if you explain it to Cap'n Skid" (the engineer), "and let him explain it to me, I reckon I understand it bettah, sah." This made me feel somewhat as Professor Berry used to after conducting a quiz on temperature-entropy.

One of the most interesting letters we ever received is the following from Fred Morrill, who is at the Imperial University, Tientsin, China. This is written to Clarence Howe, the foreign correspondent:—

It surely seemed good to hear from you after these years. I cherished a resolution to write you for many months after I came out here. Then Oriental laziness was added to my own brand, and I gave up all resolutions. If it was anybody else, I'd say I was too busy to write, but I haven't the nerve to tell a man who is a whole damned C. E. Dept. that I'm busy. There are four of us here in civil, counting one who is really mechanical, and we can't show as many students in our department as you can. Last year I taught bridges and railroads and astronomy. This year it is bridges and railroads again and *electric tramways*. I'm a dab at electric tramways. I have carried one class through bridges, and taught them more than I knew myself when I began. My other class has got about to the end of third-year structures. When I got out here, I found that the advanced class knew about as much railroads as I did. I had to teach it another year, so I learned a trifle myself. I began to feel quite wise on railroads, when a man came out here to teach surveying and geodesy who has had several years' experience as chainman, rodman, leveller, transitman, assistant engineer, etc., on western roads. Next year I expect to turn over railroads to him, and try my hand at hydraulics and sanitary branches. The sanitary man is going home for a vacation. This fall I took the class to Peitaiho, and gave them a railroad survey that was a survey. The nearest I ever got to a railroad survey before was under C. Frank. I think I invented some new standard practice on that survey. Peitaiho is a fine place. Summer resort,—seashore,—some young mountains handy. I ran my line from the sea up through a pass in the hills,—3 per cent. grade. The students caught the idea, and got quite excited about it. They worked like fiends, and every last one of them lost the skin of his nose. We haven't had a class

graduate yet, but eight civils and seven miners get through in June. . . . I didn't get much professional experience last summer, but a great deal of more general nature. Reade, professor of metallurgy, and I took a trip through Manchuria and Japan. . . . Halifax has it on Tientsin for speed, but old Tientsin isn't so slow. We have two regiments of our own, —76 Punjabis and the Royal Inneskilling Fusileers. Dances happen occasionally, and dinners more frequently. We are six miles from town, so we don't mix in the social whirl as much as we might. There are ten men and five ladies at the university, so we can get up a little excitement by ourselves. Girls are very few in Tientsin. The woods are full of attractive matrons. I don't know whether the standard is really higher or whether it only seems so by contrast with the non-existent maidens. Bridge is our besetting sin. We have loafing down to a science. We stop pretending to work at 4 P.M. and "da chin." That means tennis in summer and golf in winter, but the Chinese call them both "beat ball." They aren't particular. After that we soak up some tea, and consume large quantities of toast, jam, cake, etc. Then we indulge in the noble exercise of bridge, begin to think about dinner at eight, and that leaves a pretty thin evening. . . . Give my regards to the old guard, and tell them to look for me at the wooden anniversary in 1912. . . . I am afraid my chess laurels will look dusty beside yours. I was undisputed champion of the "Empress of India," the craft that brought me to China. . . . As our old friend Theodore would say, "I'm having a bully time" out here, and am glad I came, but I don't think I'll stay after my three years are up. I like the people here, and am learning a lot just now, but hope I'll have it 'most learned in three years. I like the students and the Chinese generally, and believe they have a big future, but some rocky going just ahead. . . . I have a Chinese teacher four times a week, and enjoy it very much. Most of the people got tired of studying, but either they studied too hard or went at it the wrong way, because I think it more fun than a goat. . . .

III. *Notes and Announcements.*

Ed Squire was married on January 26 to Miss Louise Putney Kingsbury, of Needham, Mass. Charlie Allen was best man. Mr. and Mrs. Squire are at home at 16 Washburn Avenue, Auburndale, Mass.—Walter B. Gonder was married on February 28 at Fort Morgan, Col., to Miss Elizabeth Patterson of that city. They left at once for San Francisco, whence they sailed on March 8 for the Philippine Islands, where they will be at home after May 1 at Manila. Walter is United States government sugar expert, and expects to make his home there for some time. The class congratulates these two members most heartily.—Sam Very wrote in December that he expected to take a trip to Europe about March 1, to last some three months. He is going chiefly for sketching, but also for a vacation.—Captain S. A. Kephart, U.S.A., has been transferred to Fort Adams, R.I. He attended Tech only one term, but takes an active interest in '07 affairs, and will be very glad to hear from any of the boys.—Carl Trauerman is now a mining engineer with the Johnnie Min-

ing and Milling Company at Johnnie, Nev. He is not married, but "has hopes."—Since May, 1909, L. C. Whittemore has been with the Board of Water Supply for New York city as assistant engineer, located at 236 Main Street, Poughkeepsie, N.Y.—George Griffin is now living at 25 Highland Avenue, Newtonville, Mass. He is working for P. M. Blake, civil engineer, in that place. We are sorry that this removal from Washington made it necessary for him to give up his position of district correspondent there.—We are in receipt of a business card from "W. Pearce Rayner, representing the Oscar Lear Automobile Company, makers of Frayer-Miller Automobiles and Motor Trucks, Springfield, Ohio."—Packard has been in Buckfield, Me., this winter, installing a vinegar plant for a firm. He left Ayer, Mass., last October. Mail addressed to 180 Belmont Street, Brockton, Mass., will reach him.—E. C. Richardson is still with the American Locomotive Company, travelling from one plant to another. Mail should be sent to 26 Union Avenue, Schenectady, N.Y.

IV. *Changes of Address.*

The following changes of address have taken place since the last issue of the REVIEW: J. P. Alvey, Jr., care of Arnold Company, 181 La Salle Street, Chicago.—F. W. Amadon, 58 Union Avenue, South Framingham, Mass.—E. W. Bonta, 514 James Street, Syracuse, N.Y.—C. A. Bowen, 18 Belmont Street, Lowell, Mass.—C. R. Bragdon, 1231 Asbury Avenue, Evanston, Ill.—H. R. Chase, 54 Miller Avenue, Providence, R.I.—J. W. Conover, 138 South Common Street, Lynn, Mass.—R. F. Conron, care of Thomas Conron Hardware Company, 116 East Main Street, Danville, Ill.—E. R. Cowen, care of Ferro Concrete Construction Company, Cincinnati, Ohio.—R. H. Crosby, North Shore Electric Company, 205 La Salle Street, Chicago.—P. L. Cummings, Tech Chambers, Boston.—L. R. Davis, Box 1441, Ray, Ariz.—C. R. Denmark, National Museum, Washington, D.C.—M. H. Eisenhart, 117 North Union Street, Rochester, N.Y.—J. T. Fallon, 244 Fifth Avenue, New York.—J. H. Fellows, Niles, Ohio.—J. E. Garratt, 6 Beacon Street, Room 809, Boston.—W. A. Gates, care of Layton, Smith & Hawk, Majestic Building, Oklahoma City, Okla.—J. M. Gaylord, United States Reclamation Service, Minidoka, Ida.—A. E. Greene, 1445 Monadnock Block, Chicago.—P. P. Greenwood, 204 North Howard Avenue, Austin Station, Chicago.—F. B. Groover, care of J. W. Spain, Quitman, Ga.—H. R. Hall, Room 141, State House, Boston.—L. C. Hampton, 1214 West Joplin Street, Webb City, Mo.—C. M. Hutchins, 45 Park Street, Rockland, Mass.—G. R. Jones, Filtration Plant, McMillan Park, Washington, D.C.—R. J. Karch, care of Allis-Chalmers Co., Milwaukee, Wis.—W. F. Kimball, 19 Bowker Street, Brookline, Mass.—R. F. Knight, 37

Trinity Street, New Britain, Conn.—H. C. Libby, 1300 Penn Avenue, Washington, D.C.—M. T. Lightner, Highland Park, Ill.—R. W. Lindsay, 60 Anderson Place, Buffalo, N.Y.—J. H. Link, 719 East Market Street, Akron, Ohio.—H. D. Loring, care of Ferro Concrete Construction Company, Cincinnati, Ohio.—H. W. Mahr, 179 Heath Street, Roxbury, Mass.—Kenneth Moller, 407 Brook Street, Providence, R.I.—G. A. Murfey, 155 Millard Avenue, Pasadena, Cal.—W. W. Pagon, 11 West Hastings Hall, Cambridge, Mass.—R. W. Parlin, 3 Forest Park, Cambridge, Mass.—O. L. Peabody, Forbes Lithograph Company, Chelsea, Mass.—M. H. Pease, Indian Refining Company, Cincinnati, Ohio.—Marcellus Rambo, 321 South 20th Street, Birmingham, Ala.—Willis Ranney, Avenue C and Travis Street, San Antonio, Tex.—D. C. Ruff, 598 Lincoln Avenue, St. Paul, Minn.—M. W. Sage, Y. M. C. A., Washington, D.C.—B. K. Sharp, 24 Elm Street, Brookline, Mass.—R. E. Shedd, 23 Rogers Avenue, Somerville, Mass.—Tracy Smith, 215 West 23d Street, New York.—E. B. Snow, Jr., 38 Prentis Avenue, Detroit, Mich.—O. H. Starkweather, 1040 South 26th Street, Louisville, Ky.—G. G. Symes, 777 Logan Street, Denver, Col.—Robert Tappan, 170 Fifth Avenue, New York.—E. H. Temple, Jr., 341 Broadway, Cambridge, Mass.—R. E. Thayer, 5 Hastings Road, Lexington, Mass.—E. A. Thornton, care of Ray Consolidated Copper Company, Kelvin, Ariz.—E. E. Turkington, 6 Otis Street, Watertown, Mass.—L. T. Walker, second lieutenant, U.S.A., Fort Hamilton, N.Y.—J. L. Walsh, second lieutenant, U.S.A., Fort Hancock, N.J.—P. B. Webber, 180 Exchange Street, Athol, Mass.—E. F. Whitney, General Electric Company, San Francisco, Cal.—P. R. Whitney, 85 Pearl Street, Bradford, Pa.—J. D. Whittemore, Box 406, Brattleboro, Vt.—H. S. Wilkins, 17 South Elm Street, Wallingford, Conn.—W. S. Wilson, 155 Ashland Street, Roslindale, Mass.—Any person who can give information regarding the addresses of any of the following men will help the secretary by communicating with him: Eugene Phelps, F. H. Kales, W. B. Cain, George H. Bryant, W. H. Otis, L. S. Nordstrum.

1908.

JOHN T. TOBIN, *Sec.*, care of F. F. Harrington, Bridge Engineer, Virginian Railway Company, Norfolk, Va.

RUDOLPH B. WEILER, *Res. Sec.*, 26 Brooks Street, Brighton, Mass.

I. *On the Part of the Resident Secretary*

At the alumni banquet on January 19 the class had a representation of eleven, as follows: Miss Mabel K. Babcock, E. J. Beede, B. G. Fogg, "Pop" Gerrish, Carl A. Hall, "Doc" Leslie, Howard B. Luther, Kurt Vonnegut, A. C. Winch, C. W. Whitmore and

R. B. Weiler. Owing to the "last minute" rush, it was impossible to seat all the fellows together. Moral: get your tickets early next year. On February 28 a circular letter was sent to every name on the mailing list, requesting information and cash. We are glad to say that the returns of both are gratifying so far, and hope that later returns will be as good. Two or three fellows have got the class organization mixed up with that of the Alumni Association. Each is separate, and the payment of dues to one does not cover the indebtedness to the other. The "salary" envelopes will not be opened until the June REVIEW goes to press, about May 15. The results will appear in that issue. If you haven't returned your card, do it now.—"Spike" McGuigan, on his reply card, drew a beautiful arrow, such as only Course I. men can draw, pointing to "March 15," the date of the dinner, and wrote: "Much obliged for celebrating my birthday. Was not this the intention in selecting this date?" Yes, that is the way *we* celebrate it, and Mac celebrates it by sending in his dues for 1910 in Canadian money. Oh you Mac! A local reunion and dinner was held at the Tech Union Tuesday, March 15. The following were present: H. W. Flaherty, R. C. Folsom, E. H. Newhall, E. J. Riley, C. F. Joy, Jr., C. W. Whitmore, R. I. Ripley, L. B. Ellis, H. T. Gerrish, F. A. Cole, L. H. Allen, C. A. Edmonds, C. W. Morrison, H. H. Palmer, C. H. Bangs, C. A. Hall, A. Torossian, H. H. Bentley, B. L. Leslie, W. D. Ford, Langdon Coffin, H. L. Carter, H. S. Osborne, H. B. Luther and R. B. Weiler.—H. T. Gerrish was unanimously elected as class representative on the Alumni Council to fill the vacancy caused by the resignation of H. A. Rapelye.—It was voted to hold an informal dinner at the Technology Club the second Tuesday in every other month, beginning in May, at 6.30 P.M. If those who expect to attend will drop the resident secretary a postal to that effect, it will provide against insufficient accommodation. The next dinner will be held May 10.—It is with extreme regret that we announce the death on Jan. 1, 1910, of Sam Daddow's wife at Reading, Pa., of pneumonia, after a short illness. On account of this Sam has left Reading, and has gone to St. Clair, Pa., where he is trying to forget his sorrow by engrossing himself in the development of a branch of the automobile business, of which he is a partner, at Pottsville, Pa., three miles from St. Clair. The following resolution was adopted at the dinner:—

Whereas God in his infinite wisdom and mercy has seen fit to remove from our midst Mary Davenport Daddow, wife of Samuel Harries Daddow,

Be it Resolved, That the Class of 1908 of the Massachusetts Institute of Technology feels keenly the loss which befalls one of our members; and be it

Resolved, That the Class of 1908 do hereby extend to Samuel Harries Daddow the expression of their sincere sympathy in his affliction.

II. *Matrimonial.*

"Clif" Cochrane was married Nov. 27, 1909, to Miss Theresa St. A. Barrett at Malden.—S. F. Kedy was married on Oct. 12, 1909, to a Miss Ross, of Dorchester.—J. F. Dwight, Jr., ex '08, was married April 26, 1909, to Miss Edith Louise Staples at Lowell, Mass. They reside at 27 Standish Avenue, Plymouth, Mass.—The following engagements are announced: P. L. Handy to Miss Helen Timmins, of Allston.—Leslie P. Cassino to Gertrude M. Straw, of Salem, Mass.—Carl A. Hall to Miss Carrie M. Straw, of Concord, N.H.—Archer C. Nichols to Miss Elizabeth A. Coes, of Germantown, Pa. As "Nick" is now in the Philippines, we do not suppose that he calls more than twice a week.—Leavitt W. Thurlow to Miss Julia G. Locke, Wellesley, '09.—Conrad Youngerman to Miss Mary Meadows, of Dorchester.—Benjamin Bullard was married Thursday evening, March 31, 1910, at Dorchester, to Miss Louise Heuser, of Dorchester. Guilford was best man, and Chalmers Clapp was one of the ushers.

III. *On the Part of the Secretary.*

The following notes were received under date of March 6, 1910:

I got your welcome note, and thank you for keeping me posted about the notes.

I received a letter from "Schoby" (George Schobinger, '08). He is still with the Chicago Rapid Transit Commission, and is working under compressed air on a night shift in the tunnels. This winter he represented the Chicago Athletic Association in the different meets around Chicago.

Leavitt W. Thurlow writes from Brush, Col.: "I notice that quite a bunch of the fellows are engaged or married. I'm not a benedict yet, but put me down on the engaged list. The young lady is Miss Julia G. Locke, Wellesley, '09." Thurlow becomes an assistant local manager on March 1, and is making good progress with the Great Western Sugar Company, Brush, Col. He writes that Batsford, '08, is also engaged. Congratulations are in order, gentlemen.

Carl E. Hollender, Course I., '08, is located with the Northern Texas Traction Company, Stone & Webster Management Association, at Fort Worth, Tex. He expects to be there for some time. He sends his best regards to everybody.

Waldo C. York, Course I., dropped me a line from New Bedford. At present he is getting onto the curve of lathes, milling machines and planers at the Morse Twist Drill and Machine Company in New Bedford. Expects to go to New York in the spring.

Allen Weeks, Course II., is also with the same company, doing the same work. Speaking of Weeks, York says, "He carelessly went and got married on the 3d of this month" (January).

York writes that Charlie Whitmore has "gone and got engaged." He did have nice hair. Congratulations, Charles.

Iasigi is with the New York Dock Company, foot of Nontague St., Brooklyn, N.Y.

H. F. Ballard and Savage are with the Chicago, Milwaukee & St. Paul in the bridge department at Chicago.

Ed. Price is with a prominent architect in Kansas City.

B. S. Clatur is on irrigation work at Denver, Col.

Fred Cole is making the drawings for Taylor and Thompson's new book on re-enforced concrete.

Hardy Cross, '08, Course I., is one of the busiest men in Norfolk. Professor Cross of the Norfolk Academy will become a Harvard student next fall in pursuit of knowledge and incidentally George F. Swain.

As for me, I'm still on a mud-digger in Hampton Roads, and am writing this on deck. I'll be here a month or so more, which is as far ahead as I can locate myself.

George Burns, Dartmouth '09, known to quite a few '08 men, is with the Virginian in the engineering department.

Best regards to everybody.

Yours sincerely,

JOHN TOBIN.

IV. Letters.

From S. F. Kedy:—

MARCH 3, 1910.

I received your welcome letter a few days ago, and was glad to know that you hadn't forgotten me altogether. . . . I was in Boston for a few days week before last, but could not make time to get to the Institute.

Carl [Bangs] was quite right when he told you that I was married. I married a Miss Ross, of Dorchester, on the twentieth day of October, 1909. As a man having had experience on both sides, would highly recommend the same to you. Just look at our friend Hedge. Nothing slow about him.

. . . I have a very interesting job with the above company [Minetto-Meriden Company, Minetto, N.Y.]. They term me mechanical engineer. I am in full charge of the steam plant and all steam machinery. I purchase all pumps and general steam supplies, which gives me an opportunity to meet business people. Occasionally I have a chance to make little business trips. I have been from here to New York city three times since the first of the year. . . .

This is a great country for snow. We have banks as high as ten and twelve feet. Perhaps you do not know where to locate me. Minetto is a large town of about *five hundred* inhabitants on the Oswego River, four miles south of Oswego, which is directly on Lake Ontario.

Remember me to everybody.

Sincerely yours,

(Signed) STILES F. KEDY, '08.

—From Joseph W. L. Hale:—

THE PENNSYLVANIA STATE COLLEGE,

STATE COLLEGE, PA., March 5, 1910.

Dear Classmate,—Your letter of the 28th ult. is at hand, and I am glad to furnish the statistical information you desire, and give also a short account of my whereabouts up to the present. Since graduation I have been here at State College as instructor in electrical engineering. Life at State College up among the hills of Central Pennsylvania is alto-

gether pleasant, and particularly so when you can look forward to vacation time and anticipate a trip to the "city." There is plenty of clear, crisp mountain air and plenty of good clear "water" here, and above all a magnificent mountain scenery.

The matrimonial notes in the REVIEW interested me particularly, and as courageous Tech men I am glad to learn of so many entering the happy throng and becoming benedicts. I hear from Thurlow (Course X.) occasionally, and he is getting along finely out in Colorado with the Great Western Sugar Company. The class dinner sounds good to me, and I should like to meet as many of the fellows as possible and relate experiences, but it is impossible for me to be in Boston on March 15. I sincerely trust that in the future we may all hear frequently of one another through Tech publications and through personal meeting and correspondence, and that concerted action may be obtained on matters social and of interest to our Alma Mater.

Yours in '08,

(Signed) JOSEPH W. L. HALE.

V. *New Addresses.*

L. H. Allen, 34 Avon Way, Quincy, Mass.—G. W. Bailey, care S. M. Green, Inc., 318 Main Street, Springfield, Mass.—Warren S. Baker, 110 Bellevue Street, West Roxbury, Mass.—W. E. Barton, 86 Rogers Avenue, West Somerville, Mass.—Ralph E. Beck, 2103 Douglass Street, Omaha, Neb.—Veggo E. Bird, Woonsocket G. L. Company, Woonsocket, R.I.—Francis M. Bond, Forest Products Laboratory, Madison, Wis.—Arthur E. Bremer, 921 Washington Street, Hoboken, N.J.—P. C. Brown, 51 Cushing Street, Dover, N.H.—Harry L. Burgess, American Telephone and Telegraph Company, New York, N.Y.—H. W. Calder, P.O. Box 382, Anderson, Ind.—W. E. Caldwell, 1402 St. James Court, Louisville, Ky.—H. L. Carter, 37 Beechcroft Road, Newton, Mass.—B. W. Cary, Y. M. C. A., Washington, D.C.—A. O. Christensen, Apartado 21, Sombrerete, Zacatecas, Mexico.—C. W. Clark, Avery Chemical Company, Littleton, Mass.—L. A. Clark, care Archer Iron Works, 34th Place and Western Avenue, Chicago, Ill.—G. A. Clatur, Y. M. C. A., Quincy, Mass.—S. O. Clements, care W. W. Bosworth, Night and Day Bank Building, New York, N.Y.—C. N. Cochrane, 11 Concord Street, Malden, Mass.—R. G. Crane, 112 Lafayette Avenue, Brooklyn, N.Y.—C. H. Criswell, Great Western Sugar Company, Greeley, Col.—S. H. Daddow, St. Clair, Pa.—Allston Dana, 601 South Second Street, Missoula, Mont.—L. A. Dickenson, 30 Partridge Avenue, Somerville, Mass.—H. S. Eames, Box 15, Kingston, R.I.—C. A. Edmonds, 156 Woodland Street, Lawrence, Mass.—L. K. Ferry, P.O. Box 840, Pittsfield, Mass.—J. K. Flanders, Claremont, N.H.—B. G. Fogg, 22 Toppan Street, Newburyport, Mass.—R. C. Folsom, 30 Esmond Street, Grove Hall, Mass.—A. L. Gardner, 233 Water Street, Perth Amboy, N.J.—

E. G. Genoud, Tile Wardenberg Strasse 12, Berlin, Germany.—W. B. Given, Jr., 70 Cedar Street, Chicago, Ill.—L. S. Goodman, Technology Chambers, Boston, Mass.—H. W. Griswold, United States Engineer Office, Tuscaloosa, Ala.—H. P. Gurney, M. I. T., Boston, Mass.—J. E. Hale, 10 Lea Street, Lawrence, Mass.—J. W. L. Hale, State College, Pa.—E. R. Hall, Goodyear Tire and Rubber Company, Akron, Ohio.—J. H. H. Harwood, Placer County, Newcastle, Cal.—M. C. Hayes, Box J, Niagara Falls, N.Y.—A. W. Heath, Exeter Machine Works, 35 Federal Street, Boston, Mass.—W. R. Heilman, 504 West 112th Street, New York, N.Y.—R. D. Hennen, 137 Front Street, Morgantown, W. Va.—H. W. Hoole, University Club, Milwaukee, Wis.—E. C. Howe, 39 Hancock Street, Boston, Mass.—R. T. Hyde, 9 Rue Vercingetoux, Paris, France.—M. T. Jones, 30 Rutland Square, Boston, Mass.—K. R. Kennison, 43 Silver Street, Waterville, Me.—Rinker Kibbey, Marshfield Hills, Mass.—C. C. Kinsman, Review Building, Decatur, Ill.—A. T. Kolatshevsky, Hotel Nieuten Buiten, 39 Rue Solvyns, Antwerp, Belgium.—J. A. Kydd, 40 Sycamore Street, Providence, R.I.—C. R. Lamont, Pioche, Nev.—J. F. Leary, 65 Washington Street, Newburyport, Mass.—J. H. Locke, 16 Dunster Hall, Cambridge, Mass.—C. L. Lufkin, Hudson, Mass.—G. M. J. MacKay, Colloseus Cement Company, 51 Hamburg Street, Buffalo, N.Y.—J. Scott MacNutt, care Professor Sedgwick, M. I. T., Boston, Mass.—R. A. Martinez, 398 Massachusetts Avenue, Suite 2, Boston, Mass.—Donald H. Maxwell, 1212 Hartford Building, Chicago, Ill.—Miss Ruth Maxwell, 257 Langdon Street, Madison, Wis.—H. E. McPhee, 96 South Common Street, Lynn, Mass.—A. C. Merrill, 3238 Chestnut Street, Philadelphia, Pa.—G. A. Murfey, 215 Boston Building, Pasadena, Cal.—H. G. Nicholas, American Sugar Refining Company, South 4th and Kent Avenue, Brooklyn, N.Y.—E. F. Orchard, 14 Fletcher Street, Roslindale, Mass.—F. N. Peirce, 60 State Street, Boston, Mass.—A. N. Penny, Jenkintown, Pa.—W. G. Pfeil, The Tracy, 36th and Chestnut Streets, Philadelphia, Pa.—A. G. Place, 1415 East Olive Street, Seattle, Wash.—E. A. Plumer, 112 Lafayette Avenue, Brooklyn, N.Y.—R. T. Pollock, 10 Hackfeld Street, Worcester, Mass.—A. K. Poor, 94 Pine Street, Danvers, Mass.—P. R. Powell, 1615 Walnut Street, Philadelphia, Pa.—H. A. Rapelye, 111 Maple Avenue, Edgewood, Pittsburg, Pa.—A. N. Rebori, 1393 Undercliff Avenue, New York, N.Y.—J. G. Reid, Canton, Miss.—J. R. Reyburn, Paducah Light and Power Company, Paducah, Ky.—Roger C. Rice, United States Geological Survey, Water Resources Branch, Washington, D.C.—H. S. Sargent, 54 Jefferson Street, Newton, Mass.—R. A. Schmucker, Red Hook, N.Y.—George Schobinger, 181 La Salle Street, Chicago, Ill.—H. R. Sewall, Allis-Chalmers Company, 502 Wilson Building, Dallas, Tex.—E. P. Slack, Carnegie Institute, Nutrition Laboratory, Villa Street, Roxbury,

Mass.—A. C. Sloss, Jr., 717 Live Oak Street, Dallas, Tex.—W. D. Spengler, 5901 Thackery Avenue, Cleveland, Ohio.—C. D. Steele, 654 Maryland Avenue, Pittsburg, Pa.—Charles M. Steese, instructor in mechanical engineering, Colorado School of Mines, Golden, Col.—W. A. Stocking, 2048 East 115th Street, Cleveland, Ohio.—L. H. Sutton, 1333 Fairmont Street, Washington, D.C.—H. P. Sweeny, St. Michael, Cambria County, Pa.—J. R. Tabor, 204 Binz Building, Houston, Tex.—J. M. Talbot, 77 Townsend Avenue, Stapleton, N.Y.—L. W. Thurlow, Box 116, Brush, Col.—F. W. Tupper, Jr., R. F. D. 4, Newburg, N.Y.—Tsok Kai Tse, Vulture Mines, Wickenburg, Ariz.—L. E. Wemple, 5822 Von Versen Avenue, St. Louis, Mo.—Ching Yu Wen, Livingston Hall, Columbia University, New York, N.Y.—Mason T. Whiting, United States Engineer Office, Wakefield, R.I.—G. D. Whittle, 1000 Tyler Street, Amarillo, Tex.—E. I. Williams, Villa Mirafiore, Via Nomentana 66, Rome, Italy.—Masanao Yendo, Engineer College, Waseda University, Ushigome, Tokyo, Japan.—Conrad Youngerman, 20 West 43d Street, New York, N.Y.

The resident secretary will be glad to receive the addresses of the following: M. L. Bodenstein, G. R. Cooke, Miss Susie T. Folsom, F. L. Franks, J. M. Hatton, Roy Hunter, J. E. Johnson, A. F. Mohan, U. J. Nicholas, W. L. Pratt, Walter D. Reed, N. S. Hammond, C. S. Colson.

C. A. Hall is with Herbert L. Sherman, testing laboratory, 12 Pearl Street, Boston, Mass.—Harry S. Chandler is with the Monsanto Chemical Works, St. Louis, Mo.—A. C. Merrill is instructor in mechanical and machine drawing, kinematics, crane design, steam engines and boilers at the University of Pennsylvania.—C. W. Keniston is instructor in qualitative and quantitative analysis, Rolla School of Mines, Rolla, Mo.—Langdon Coffin is with the Samson Cordage Company, 88 Broad Street, Boston, Mass.—P. L. Handy and A. Ellis, Jr., are with the Underwriters' Bureau of New England, 93 Water Street, Boston.—Miles Sampson is with the Howard and Bullough American Machine Company, Pawtucket, R.I.—Carl Bangs is with the Submarine Signal Company, 255 Atlantic Avenue, Boston, Mass.—W. H. Mason is with Marcus Mason & Co., Produce Exchange, New York.—T. E. Hale, 112 Oak Street, Manchester, N.H.—Jose Gomez, care of Director of Civil Service, Manila, P.I.—J. H. Caton, 3d., care of Bureau of Public Works, Manila, P.I.—Samuel T. Silverman, 817 Hollins Street, Baltimore, Md.

1909.

CARL W. GRAM, Sec., Mass. Inst. of Tech., Boston, Mass.

I. *On the Part of the Treasurer.*

Regular class dues of one dollar (\$1) for 1910 are now due.

II. *On the Part of the Secretary.*

As each class is entitled to representation in the Alumni Council, and we have as yet no representative, it will be necessary to hold an election. Ballots will therefore be mailed to members of the class, and a prompt return of the same with the annual dues will be appreciated. We need the dues badly, as the class funds are extremely low, and need replenishing.

III. *Married and Those Wishing to Be.*

Our worthy President, Jim Critchett, is setting a good example. "Jim" came home for a week's vacation at Christmas, and at that time announced his engagement to Miss Ruth Walton, of Newtonville, Mass.—On January 8 Bill Jenkins was married to Miss Nellie Frances Harrington, of Newtonville, Mass. They are now living in Cleveland at 1876 East 73d Street.—John Christie (V.) announced his engagement to Miss Olive Mills Beach, of Springfield, on March 10.—It is rumored that H. S. Pardee, who is in the testing department of the Commonwealth Edison Company of Chicago, is engaged.—D. G. Haynes (VI.) was married December 25 to Miss Emma Pellet, of East St. Louis, Ill.—It was stated in the last REVIEW that Cloudman was the first '09 man to enter the bonds of matrimony, but we will take that back, as L. H. Johnson (VI.) was married last June to Miss Blanche W. Robinson, of Roxbury, Mass. Johnson is in Chicago with the Western Electric Company. Address is 125 North 44th Avenue, Chicago.—Congdon has announced his engagement to Miss Miriam Harris, Providence, R.I.—Maurice Bullard (II.) was married March 24 to Miss Amelia M. Clough, of Brookline, Mass. Bullard is now in Manchester, N.H., with the W. H. McElwain Company.—H. W. Paine (X.) announced his engagement during the Christmas holidays. "Spec." resigned his position as assistant in the organic chemical laboratory on March 12 to take up a position in electroplating work in Providence.—Chester H. Pope (X.) was married on March 21 to Miss Ruth E. Tucker, of Winthrop, Mass. Carl Gram (X.) did the honors as best man. About a dozen Tech men were on hand for the occasion, and, needless to say, "Chet" received a good send-off.

IV. *Notes.*

E. A. Ware is superintendent of concrete construction for Stone & Webster in Schenectady.—J. C. Dort (I.) is now with the Boston "L."—H. B. Winterstein is with the Jacksonville Electric Company (Stone & Webster).—J. N. Brooks is in the hydraulic construction department of the Tennessee Coal and Iron Company.—F. G. Perry (VI.) has returned to the Institute as an assistant in the Electrical Engineering Department.—Altamirano is spending part of his time teaching applied mechanics and mechanism in the Engineering School of the City of Mexico and the remainder with a German electrical firm. He says he is "well fixed."—A. J. Barnes is in New York with the New York Telephone Company.—A. S. Gibbs is with Edison Company of Boston.—C. N. Harrub has been placed in charge of the water supply of the city of Springfield, Mass.—M. E. Kelley (II.) is assistant engineer in the Berwick Power Plant.—G. S. Witmer (VI.) is in the employ of the Isthmian Canal Commission, Empire, C.Z. (Panama).—W. E. Boardman is in Greenfield, Mass., with Wells Brothers, manufacturers of Little Giant Screw cutting tools and machinery.—It has been reported that V. C. Grünau was recently made superintendent of a mine in Velardena, Mexico.—Fred Moore dropped in to see the secretary about the first of March. He is assistant superintendent of the La Viborita gold mine, which is located in the mountains of South America, and was up to Boston on a business trip. The mine is eight thousand feet above sea-level, where the thermometer rarely goes below 55° F. or exceeds 70°. It takes two months to get to the mine from New York. First to Porto Colombia by boat, then nineteen miles by train to Barranquilla, where they embark on a fifty-mile voyage up river to Porto Berrio. From there to Sofia is a trip by rail of sixty-one miles (express trains travel twelve miles per hour), after which comes a two and a half days' ride of forty-five miles by mule-back to the mine. Moore exhibited a piece of perfectly preserved wood which was part of a tree trunk that they had run into about two hundred and fifty feet below the surface.—Jim Finnie, who has been until recently with the engineering department of the National Electric Lamp Association, is now with the Warren Electric and Specialty Company of Warren, Ohio, but he is at present working for them in St. Louis. His address is care of Maryland Hotel, St. Louis.—Reg Millard has at last been located, and "Fergie" is awarded honorable mention for forwarding us his address, which is Reginald William Millard, S.B., resident engineer, installing a power plant, Big Chute, Port Severn, Ontario, Canada. Just as this is going to press, Dick Ayres informs us that Reg is engaged. Further information in the next issue.—C. S. Robinson, after completing his circuit of the globe, is now in Cleveland, Ohio, with

the Sherwin-Williams Company, who claim to cover the globe with their paints and varnishes. The secretary received a letter from Robby which is extremely interesting and well worth passing along. It is in part as follows:—

I have certainly had a trip, and can boast of several things that you fellows haven't had, one of which being the privilege of eating canned whale meat on a day that had no name, when we crossed the one hundred and eightieth meridian on the Pacific. I have succeeded in keeping heart-free, although there was a Parsee maiden in Bombay to whom I promised to write, but whose address I have lost. But it's nothing serious.

It's a peculiar thing, but, whenever one of our party gets to talking with a friend about the trip, he always selects three topics, which he considers the most likely to interest one. The first of these enticing topics is (always) the Parsee Towers of Silence in Bombay. The Parsees, who are fire-worshippers, originally coming from Persia, have the pleasant custom of exposing the bodies of their dead in great round towers, where there are several hundred vultures to make a meal of them. We had the pleasure (?) of viewing the outsides of these affairs and of examining the talons and beaks of the great birds that sat bunched along the top of the wall, waiting for their next delicious morsel. But the Towers of Silence were mild compared with the way the Hindoos disposed of their dead. They burn them, and they come as near doing it alive as the law allows. The procedure goes something like this. The dying person is brought, while still alive, to the Ganges (if he lives near enough), and placed in what is called the burning ghat, which is a sort of yard, from which steps lead down to the river, and before he dies he sees his loving relatives build a pile of cord wood, which he knows is for his especial benefit. Then, when he is dead, he is taken and dipped in the river to purify him, although, if you could see the water, you might have doubts on the subject, and then the corpse is laid on the pyre, and the nearest relatives apply the torch. These pyres are rarely over four feet long, and, as most good Hindoos are longer than that, they must of necessity project at both ends, and consequently the corpse is not consumed evenly. So, when the proper time comes, the relatives take sticks, and fold what is left of the legs and head over on to the fire, so they, too, may get their full share of the treatment. Occasionally a man is too poor to purchase sufficient fuel for the total consumption of his remains, and, as it is the custom to throw the ashes on the river, it is not uncommon to see partially burned bodies floating down stream and people in the water bathing within a few feet of them. You can bet we were glad to get out of India.

The third topic we always tell about is the execution at Canton, China. It happens that a life is worth very little in China, and so the penalty for petty larceny is decapitation. For worse crimes the penalty increases, until the greatest penalty is being cut into forty-seven pieces while still alive. We all behaved ourselves in China. There is a regular execution ground in Canton, which all tourists visit, and we did the customary thing; but, to our horror, when we arrived, there were six Chinamen lying on the ground, with their heads in different parts of the grounds. Gosh! it was a bloody sight, and I never came nearer keeling over than I did then. There was also a woman hanging on a cross, who had been strangled

to death. You can believe we did not tarry there long. One look was sufficient.

But we saw so much that was beautiful and pleasing that we forgot most of the unpleasant sights, and I was very lucky in the pictures I took. I have some three hundred good films, and they will make a peach of a collection. Between the curios I bought—and we spent most of our time in bazaars and shops—and the pictures, I shall have nearly enough to furnish a nice little house when I enter that state into which all you fellows are going. I have some pictures of people who were afflicted with *mal-de-mer*, which I wouldn't sell at any price. Oh, yes, I was seasick, but only to the extent of one orange, and some of my Indian pictures were very good. I'm sorry now that I haven't any prints to send you, but I will send some later.

Travellers are used to writing their sensations on seeing things, and I was more or less amused on comparing other sensations with my own. Take the Sphinx, for instance. Most people gaze in abstract wonder at this big statue, and lose themselves in puzzling out what it was meant to be; but I'm afraid my feeling was one of antagonism at Napoleon for knocking off the nose with a cannon-ball. And in three countries where the natives wear next to nothing, and sometimes forget the next part of it, while some were rather troubled about it, I felt, and, if you had been there in that sun, you would have felt, too, like getting into the same rig. I came to the conclusion that reforming the heathen was all right in some things, but, when it comes to putting them into European garments, it's going a little bit too strong.

To me the most beautiful thing I saw all the way around was Fujiyama in Japan. The Japs get it into every picture that they can, and it certainly is worth it. When we were there, it was covered with snow, and, as it is nearly a perfect cone, except for the extreme peak, you can imagine what a sight it was, a white cone against a darker sky. But the romance of it was spoiled by one of our party, who tried to climb it, and imbibed saké, a whiskey made of rice, as refreshment on the way up. It is 12,356 feet high, and he was within 500 feet of the top when the saké got to his head, and he forgot which way he was going, turned around, and came down again. He was rather sore when he recovered.

But, honestly, when I got back, I was glad to go to work again, for four months' loafing sounds good, but it gets tiresome after a while, and now I am getting along O. K., so remember me to the bunch.

V. *Changes of Address.*

The following changes of address have been received: Elliot Q. Adams, 623 Terrace Place, Schenectady, N.Y.—Salvador Altamirano, 2A Edison 45, Mexico City, Mexico.—Frank D. Applin, 200 Roxbury Street, Keene, N.H.—Thomas H. Atherton, Jr., Princeton Club, Gramercy Park, New York, N.Y.—Richard S. Ayres, M. I. T., Boston.—Miss Elizabeth B. Babcock, 102 Crawford Street, Roxbury, Mass.—Edwin C. Ball, 16 Cottage Avenue, Winthrop Branch, Boston, Mass.—Harold F. Ballard, 633 Belden Avenue, Chicago, Ill.—Albert J. Barnes, 33 East 24th Street, New York, N.Y.—Louis Barnett, 480 Tremont Street, Boston, Mass.—Seymour F. Barnett, 111 29th Street, Seattle, Wash.

—Charles L. Batchelder, 86 Sherman Street, Lowell, Mass.—
L. G. Beers, 344 Equitable Building, Atlanta, Ga.—Merton
Belcher, care of Belcher & Crane Abstract Company, Eureka,
Cal.—H. C. Bender, 347 Ralston Street, Reno, Nev.—Herbert
H. Bennett, 55 Jackson Street, Lawrence, Mass.—Lewis C. Ben-
nett, 5807 Washington Avenue, Chicago, Ill.—Arthur C. Besse-
lievre, 330 Benson Street, Camden, N.J.—Francis H. Bishop,
Summit Avenue, Wollaston, Mass.—T. B. Black, care of Vulture
Mines Co., Wickenburg, Ariz.—Aldrich Blake, 120 South Col-
lege Avenue, Grand Rapids, Mich.—Rea E. Blankenbuehler,
1800 South Second Street, St. Louis, Mo.—William P. Blodget,
care of Munroe & Cie True Scribe, Paris, France.—Kenneth T.
Blood, 366 Main Street, Concord Junction, Mass.—Wallace E.
Boardman, 44 Franklin Street, Greenfield, Mass.—J. C. Bollen-
bacher, 645 College Avenue, N., Bloomington, Ind.—J. H. Bos-
song, care of George B. Post & Sons, 34th Street and 5th Avenue,
New York, N.Y.—John N. Boyce, Drexel Building, Philadel-
phia, Pa.—Walworth K. Bradbury, 369 Harvard Street, Cam-
bridge, Mass.—John N. Brooks, 240 West State Street, Trenton,
N.J.—Clarence J. Brown, 1314 East 62d Street, Chicago, Ill.—
George S. Brush, 101 Milk Street, Boston, Mass.—Denison K.
Bullens, Pennsylvania State College, State College, Pa.—Ballard
Y. Burgher, Pennsylvania Steel Company, Steelton, Pa.—Stephen
L. Burgher, 45 Highland Avenue, Winthrop, Mass.—Felix A. Bur-
ton, 34 Webster Court, Newton Centre, Mass.—Samuel Cabot,
141 Milk Street, Boston, Mass.—Luis Cacicedo, Havemeyer Hall,
Columbia University, New York, N.Y.—Charles L. Campbell,
75 Pitts Street, Boston, Mass.—Richard L. Cary, Mass. Inst. of
Tech., Boston, Mass.—Frank A. Casey, River Street, Billerica,
Mass.—Edward P. Chapman, Pueblo Plant A. S. & R. Company,
Pueblo, Col.—Laurance D. Chapman, Hillside Road, Wellesley
Farms, Mass.—Thomas G. Chapman, M. I. T., Boston, Mass.—
Philip H. Chase, 42 Kirkland Street, Cambridge, Mass.—John
A. Christie, 16 Exeter Street, Boston, Mass.—Horace L. Clark,
804 Cooper Building, Denver, Col.—M. Stanley Clark, P. O.
Box 1441, Pinal County, Ray, Ariz.—Walter W. Clifford, 60
Oak Street, Hyde Park, Mass.—Nathan L. Coleman, care of
L. R. Bedell, 1108 Story Building, Los Angeles, Cal.—Albert K.
Comins, 39 Chestnut Street, Wakefield, Mass.—Howard W.
Congdon, 262 Grand Avenue, Brooklyn, N.Y.—Eugene L. Con-
nolly, Metcalf, Mass.—E. F. Cookinham, 913 Wolf Street, Syra-
cuse, N.Y.—James H. Critchett, 7615½ Saginaw Avenue, Chi-
cago, Ill.—Mitchell J. Daley, Elmerton Hotel, Bingham, Utah.—
John F. Davis, Rumford Falls, Me.—Myron M. Davis, 13 Dow
Street, Portland, Me.—Chester L. Dawes, 26 Addison Street,
Arlington, Mass.—Professor James S. Dean, A. and M. Col-
lege of Texas, College Station, Tex.—Thomas C. Desmond,
3414 Disston Street, Tacony, Pa.—James W. Dickinson, 322

10th Street, E. Duluth, Minn.—F. J. A. Doherty, Guantanamo Sugar Company, Guantanamo, Cuba.—Howard H. Dole, 4 Walker Street, Portland, Me.—Benjamin W. Dow, Columbus, Ga.—Henry C. Drown, B. F. Sturtevant Company, Hyde Park, Mass.—Warren L. DuBois, 811 Holland Avenue, Wilkinsburg, Pa.—Henry W. Dun, Jr., 174 Chestnut Street, Albany, N.Y.—Francis H. Dunnington, 326 South 16th Street, Philadelphia, Pa.—Matthew F. Durgin, 157 Mt. Auburn Street, Cambridge, Mass.—Brainerd Dyer, care of National Carbon Company, Cleveland, Ohio.—Edward L. Edes, care of R. R. Camp, Shively, Cal.—John J. Elbert, 45 Hemenway Street, Boston, Mass.—George I. Emerson, 225 Newbury Street, Boston, Mass.—F. R. Faulkner, 139 Pembroke Street, Boston, Mass.—Thornwell Fay, Jr., care of Texas Portland Cement Company, Dallas, Tex.—Raymond H. Fellows, 50 Fairview Avenue, Arlington, Mass.—William C. Ferguson, Box 486, Walla Walla, Wash.—James I. Finnie, 1910 East 55th Street, Cleveland, Ohio.—Matthews Fletcher, 2847 North Meridian Street, Indianapolis, Ind.—Lawrence R. Forrest, 75 Essex Street, Swampscott, Mass.—Marion H. Foss, P.O. Box 517, Reno, Nev.—Charles Freed, 40 Market Street, Cambridge, Mass.—Bernard R. Fuller, care of J. G. White & Co., Scottsbluff, Neb.—George M. Gadsby, 511 College Street, Marietta, Ohio.—C. W. Gammons, 1290 Washington Street, West Newton, Mass.—Keyes C. Gaynor, Sioux City, Ia.—Arthur S. Gibbs, 26 Cumberland Street, Boston, Mass.—G. M. Gilkison, Telluride Power Company, Provo, Utah.—Clifton G. Gilpatrick, 27 Paisley Park, Dorchester, Mass.—Abram H. Ginzberg, 595 Massachusetts Avenue, Cambridge, Mass.—R. Clifford Glancy, 53 Cushing Street, Waltham, Mass.—Harold M. Glazier, 12 Lincoln Street, Hudson, Mass.—Louis S. Gordon, P.O. Box 1492, Renton, Wash.—George H. Gray, 159 Pleasant Street, Arlington, Mass.—W. Duncan Green, 72 Macon Street, Brooklyn, N.Y.—Newman B. Gregory, Box 59, Joplin, Mo.—James S. Groff, 18 Meeting Street, Newport, R.I.—Edwin Hahn, care of William Hahn Company, 7th and K Streets, Washington, D.C.—Dr. Wilfred S. Hale, 50 Clinton Avenue, Albany, N.Y.—Elias S. Hanna, 20 Berwick Park, Boston, Mass.—Nathan Harris, 297 Fargo Avenue, Buffalo, N.Y.—Calvin N. Harrub, Mundale, Mass.—Arthur E. Hartwell, P.O. Box 105, Houston, Tex.—Tetsutaro Hasegawa, care of Furukawa Mining Company, Yayascho Kojimachiku, Tokio, Japan.—Harry L. Havens, 718 Dwight Building, Kansas City, Mo.—Delos G. Haynes, 1440 Meridian Street, N.W., Washington, D.C.—George A. Haynes, care of Haynes Porter & Co., Medford, Mass.—Leon J. D. Healy, 41 Webster Avenue, Chelsea, Mass.—F. M. Heidelberg, 1417 Pease Avenue, Houston, Tex.—Charles Hibbard, 230 43d Street, Newport News, Va.—G. E. Hodsdon, care of Cons. C. and S. Mng. Co. of Boston and Montana, Great Falls, Mont.—Harold

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